DOCUMENT RESUME

ED 068 314 SE 014 714

TITLE	Smoking and Health. A Guide for School Action Grades 1-12.
INSTITUTION	Ohio State Dept. of Health, Columbus.
SPONS AGENCY	Public Health Service (DHEW), Washington, D.C.
PUB DATE	Jun 68
NOTE	100p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Curriculum Guides; *Elementary Grades; Fundamental Concepts; *Health Education; Instructional Materials; Learning Activities; *Secondary Grades; *Smoking

ABSTRACT

Enabling teachers to present a detailed unit on smoking is an objective of this curriculum guide. It organizes information which, if made a relevant part of the student's experience, attempts to help him effectively resist the pressures to begin smoking. Seventeen units, arranged in sequential order, cover cardiovascular and respiratory systems, statistical data, lung cancer, physiological changes, social influences, aesthetic features, economics, advertising, and moral issues. Repetition and over-lapping of content is intended to reinforce commitments resulting from previous instruction. Behavioral objectives, related concepts, content material, experiences or suggested learning activities, and resources and materials are arranged in column form for each unit. Opposite this information, appropriate grade level use is indicated; elementary, designating grades 5 and/or 6; junior, specifically for grade 7 but including grades 8 and 9; and senior, primarily for grade 10 but also grades 11 and 12. Minimum time recommended for implementation of the units is five periods for elementary grades and three periods for upper grades. Appended material includes a checklist of facts related to cigarette smoking and health; vocabulary or terms; suggestions for smoking education in grades 1-4; scientific and social experiments; and suggestions for integrating smoking education with other subjects. (BL)

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ED 068314

SMOKING AND HEALTH

A GUIDE FOR SCHOOL ACTION

GRADES 1 - 12

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SE 014 714

OHIO EDUCATION PROGRAM ON SMOKING AND HEALTH
AN INTERAGENCY PROJECT

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CLEVELAND WELFARE FEDERATION
OHIO AFL-CIO
OHIO ASSOCIATION OF HEALTH, PHYSICAL EDUCATION AND RECREATION
OHIO ASSOCIATION OF SCHOOL ADMINISTRATORS
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SCHOOL EDUCATION COMMITTEE, CINCINNATI PUBLIC SCHOOLS

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INTRODUCTION

Since the publication of the Report of the Surgeon General on Smoking and Health, there has been increased concern about the problem of cigarette smoking and its effect on health. In July 1966, an inter-agency project, the Ohio Education Program on Smoking and Health was initiated to coordinate Smoking and Health activities within the State of Ohio.

One of the objectives of the program is to have a school population sufficiently knowledgeable of the effects of cigarette smoking on health and life expectancy that a decision to smoke or not to smoke is made with full awareness of the consequences of the decision. To meet this objective, the Ohio Education Program on Smoking and Health felt teachers needed to be provided with content material on this subject. The following curriculum guide was developed at Smoking Research in San Diego, California. Duplication of this effort seemed needless; therefore, permission to reproduce the San Diego material was granted. All resource material has been adapted to meet local needs of Ohio communities. The Ohio Education Program on Smoking and Health effort is funded by the Ohio Department of Health in Columbus, Ohio.

Hopefully, with this curriculum guide, teachers will be able to present a detailed smoking unit to their classes.

The Ohio Education Program on Smoking and Health

FORWARD

This publication is the first major attempt of Smoking Research/San Diego to provide schools in our county with current information and advice on the seriousness of the smoking problem. Every effort has been made to make it easy for the teacher to lift any section out of the guide and without a great deal of searching in various references, to present to the class a sound smoking unit.

This guide is the result of a great deal of work and in fact, dedication by Ralph Grawunder, Ed.D., professor of health education, San Diego State College. Additional thanks go to the San Diego Unified School District, and the Educational Programs for Youth Commission of the Smoking Research project.

June 1968 Smoking Research/San Diego

ACKNOWLEDGMENTS

The following resources have been particularly helpful in preparing this Guide:

American Cancer Society, Cincinnati. Hamilton County Unit.
"Motivating Motivators--A practical approach to the smoking problem."

California Interagency Council on Cigarette Smoking and Health
"Teacher's Resource Kit on Smoking and Health" Grades 5 through 8 and Grades 7 through 12.

Hawaii State Department of Education
"Smoking: A Hazard to Health - A Teacher's Guide" (1966)

Idaho Interagency Committee on Smoking and Health
"Idaho Smoking and Health Project Guide for Students and Teachers"

State of Maine - Department of Health and Welfare
State of Maine - Department of Education
"Smoking and Disease - A Teacher Reference" 1964-1965

Maryland Committee on Smoking and Health
"Resource Guide on Smoking and Health"

Michigan Council on Smoking and Health
"Smoking and its relationship to Health and Disease: A Resource Guide for Michigan Teachers of Grades 5-12

New Jersey State Department of Health and the New Jersey State Department of Education
"Smoking and Health 1966: Teaching Reference Guide"

Ohio Smoking and Health Committee
"Will Your Students Smoke - A Resource for Teachers" (1965 Revision)

SMOKING AND HEALTH

A GUIDE FOR SCHOOL ACTION

THE PROBLEM

Every day some 45 hundred American boys and girls begin smoking cigarettes. Each of these youngsters, if he continues smoking, reduces his life expectency by about nine years. If present trends continue, one million young people now in school will die prematurely of lung cancer and some five million more will die prematurely of other smoking related disorders. Additionally, when an individual begins to smoke, he becomes vulnerable to more years of illness and disability from a variety of causes than would be the case if he did not begin smoking.

Cigarette smoking is indeed a major health problem of our time. It is a problem which is especially tragic in the face of the obvious preventive measure--don't smoke.

Obvious as the solution is, however, attaining it is exceedingly elusive in the face of the vast commercial, psychological, social, and economic complexities involved. Some attempts to dissuade youngsters from beginning the smoking habit have had some, though undramatic, success. Despite the overwhelming evidence of the hazards of smoking with which young people may become familiar, more compelling to them is their total day-to-day experiences and the almost constant pro-smoking stimuli.

Can anything be done to effectively discourage smoking among young people? Quite possibly, but the answer does not seem to lie in conventional means.

SAN DIEGO'S PROGRAM

Under a United States Public Health Service Grant, San Diego is attempting a new approach to the smoking problem. It is called the "Total Community Approach" and it means just that: namely, that the entire community is mobilized in an attempt to effect an influence on the smoking problem. Instead of "squeezing the balloon" at one point only to see it expand at other points and fill in again when one lets go, an attempt is made to effect a controlled deflation of the "balloon" throughout its length. Under this total program, then, the activities in smoking education in the schools do not occur in isolation but are supported by simultaneous anti-smoking efforts among other youth groups, adults, health professionals, mass media, military services. If successful, San Diego's program will become a model for similar programs in other communities in attacking not only the problem of smoking but in dealing with other health problems which have remained similarly elusive.

PHILOSOPHICAL BASIS AND THE STAKES

Underlying the problem and the San Diego Program are some rather fundamental philosophical questions. Is it possible to employ rational means to intervene and reduce public acceptance of a killer which is a socially accepted practice? Can educational processes effectively counter both a general acceptance of a widespread practice and the immense commercial propaganda support for that practice?

Negative answers to these important questions lead to hard and, to some, unacceptable conclusions. If well-organized educational efforts fail, what are the alternatives which remain? One course would be to ignore the problem and accept illness and death as one of the real and calculated costs of smoking, accepting at the same time the moral and economic rights of a powerful industry and its image makers to continue to ply a destructive trade. Another course, operating on an assumption of man's disinclination to choose rationally would produce a "safe" cigarette (highly unlikely) or cigarette substitute to protect him. Still another course might be much tighter governmental controls and regulations on cigarette manufacture, promotions, sales, etc. It boils down to the questions, "Can individuals and communities be helped to choose well or must they be manipulated and/or protected from themselves?"

TOTAL SCHOOL APPROACH

This is the apparent extension of the total community idea at the school level. In this approach there is well planned direct instruction on the problem at various designated levels but, additionally, the problem is dealt with from as many other angles as possible. Ideally, all teachers of all subjects would sieze every opportunity to insert episodes of smoking education whereever and whenever appropriate. Student leadership and student activities would function to support non-smoking commitments however possible. In terms of the student's experience, he would not merely be exposed to the hazards of smoking in one or two classes but would find himself in a school-community environment which continually supports his preference not to smoke. Decay of non-smoking commitments would thereby be prevented.

PROGRAM AIMS FOR YOUTH

1. Fewer youths begin smoking
2. More smoking young people stop smoking
3. Young people express non-smoking preferences freely
4. Young people express anti-smoking attitudes freely but appropriately

ORGANIZING INDIVIDUAL SCHOOL EFFORTS

1. Announcements and progress reports at faculty meetings
2. Student-faculty-parent sub-committees to organize efforts
3. Selection and charge of student-faculty-parent coordinators
4. Orientation meeting for students, faculty, and parents
5. Individual school workshops to study, share findings, and plan activities
6. P.T.A. programs
7. Project bulletin board in teacher's lounge
8. Support for teachers who are trying to quit smoking

ENCOMPASSING GRADES ONE THROUGH TWELVE

The planned instructional program in smoking is designed to encourage early individual behavioral commitments to non-smoking and to provide for regular and repeated reinforcements of these commitments. Any aspect of the smoking problem is suitable content for curricular experiences. While grade placement of specific content and experiences are suggested, any teacher at any level in any subject area is encouraged to use those materials and approaches which he deems suitable.

It is not expected that many young people will become active smokers before the junior high years, but their self-concepts and their attitudes toward smoking begin building in infancy. The earlier and more frequently non-smoking stimuli come into their experience the more likely they are to avoid becoming smokers. Primary and intermediate grade teachers are therefore urged to weave the non-smoking threads into the curriculum fabric whenever possible and appropriate. Suggestions provided for coordinating these threads with regular health instruction and the health texts may be used as points of departure.

Direct units in smoking and health are planned for grades 5 or 6, grade 7 (health), grade 8 (Science), grade 10 (Health). In addition correlated instruction is expected in all grades especially health and science classes but in other subject areas also.

PSYCHOLOGICAL MODELS AND COMPONENTS OF THE PROGRAM

1. *Environments supportive of non-smoking commitments are basic.* Typically, an individual does not "choose freely" to become a smoker or not. Instead, the environment he finds himself in, especially as related to self-concept, and interpersonal relationships, cause him to see himself as a smoker or not and to become a smoker or not. The school may create an environmental base which supports the development and maintenance of non-smoking commitments.

2. *Congruence and consistency* in overt behavior, in knowledge, and in attitudes flow from appropriate instruction. Once students decide not to be smokers they are much more receptive to instruction which is cognitively and affectively supportive of that commitment.

3. *Principles of primacy and recency* suggest that the positive aspects of smoking should neither begin nor conclude a smoking unit or single lesson but should be sandwiched between the negative associations.

4. *Anxiety threshold* phenomena suggest the *controlled* use of anxiety producing experience. Mild fear of hazards of smoking and some anger toward the forces that purposely promote smoking are useful motivators but extreme fear and anger, being difficult emotions to resolve, encourage the individual to recoil to a more comfortable position, void of these emotions and the stimuli which gave them rise. Strong anxiety associated with the non-smoking position may make one more available to contrary pro-smoking arguments.

5. *Repetition and spaced exposure* is called for throughout the program. The upper grades will handle the concepts involved in greater depth and detail but there should be little concern about "too much" repetition and over-lapping.

6. *Active involvement* of students is called for as in all effective teaching-learning experiences. Teachers are urged to arrange as much active "working with" discovering, reporting, etc as possible. Maximal use of the rhetorical question is in order when lecture is the only instructional alternative.

7. *Peer social pressures* must be utilized to reinforce individual commitments to non-smoking. Individuals should be given an opportunity to express this commitment to the group and know that the group supports his position. If an entire school should develop this attitude it is far less likely that individuals would begin smoking. Student leaders who are resistant to teacher communications may be effectively utilized to present and debate the non-smoking position.

8. *Credibility of sources* must be maintained. The facts of the smoking problem speak for themselves. Exaggeration is not only unnecessary but when discovered by skeptics tends to destroy the entire case. Teachers who present factual material must be able to document their accuracy. This is especially true since many of the facts in smoking and health appear so startling in the face of the wide acceptance and popular illusions about the safety of smoking.

9. *Sequential structuring* may well be employed to lead students from the immediate to the remote, simple to complex, direct to indirect, whole-part-whole, etc. Initial and culminating focus in smoking education may center about positive healthful goals and activities interspersed with consideration of possible barriers--smoking.

AVENUES OF APPEAL IN SMOKING EDUCATION

1. Physical fitness and athletic performance
2. Aesthetic disadvantages of smoking
3. Economic (personal and national) disadvantages of smoking
4. Maturity and genuine expressions of maturity
5. Physiological and health hazards
6. Resistance to "the big sell" (advertising and propaganda)
7. Self-worth, self-mastery, independence, pride, etc.
8. Models to emulate (athletes, astronauts, mother, etc.)
9. Positive personal, economic, social, aesthetic, and physiological *advantages* of not smoking.

NOTES TO EDUCATORS

To Educators Who Have Never Smoked: You are undoubtedly happy that you have never been a smoker. Your students are interested and will benefit from hearing of your preference to be a non-smoker and of the circumstances that helped you resist the pressures to smoke.

To Educators Who Have Stopped Smoking: You are especially valuable to your students as an example. Tell them why you started smoking and why and how you stopped. You might stress that for many smokers stopping is extremely difficult and that it would certainly be better never to start.

To Educators Who Are Smokers: If you are not admired by students, please keep smoking to serve as a negative example. Otherwise, consider seriously your smoking as being supportive of pressures to cause young people to smoke. It would undoubtedly be better for you and for students if you stopped, but if you can't it would be helpful if you could explain your smoking to students in an honest way which would be non-supportive of their tendencies to smoke.

KITS FOR SMOKING EDUCATION

Kits are on hand in each school or are available from Ohio Department of Health (469-2144). These kits contain pamphlets, graphs, charts, posters, etc. to be used with students or by teachers in preparing and conducting instructions.

CURRICULUM GUIDE EXPLANATION

The following detailed curriculum guide organizes the major behaviors, concepts, content, and activities which, if made a relevant part of a student's experience, is most likely to "free" him to resist effectively the pressures to begin smoking.

The guide is not as awesome as it might look initially. An attempt has been made to include in one guide as much useful material as possible in order to reduce teacher preparation and searching for materials to a minimum. In most cases a teacher at grades 5 or 7 or 10 may leaf through the guide and very quickly check the most important and appropriate concepts, content, and experiences to be utilized for the time he has available for the smoking unit. Further planning and preparation while strongly recommended is not essential.

The *Guide* contains seventeen numbered major Behavior-Concepts-Content "units" arranged in a presumed "ideal" sequence. These "units" are not separate entities but are related to one another, especially those of adjacent placement. Several "units", then, may be combined in the classroom experience. And, of course, materials and resources are frequently applicable to several "units".

Grade placement suggestions are indicated in the right margins with *"Elem." designating grades 5 and/or 6; "Jr." designating grade 7* most specifically but grades 8 and 9 as well; *"Sr." designating grade 10* most specifically but including grades 11 and 12 as well.

Repetition and over-lapping of content is intended in order to reinforce commitments resulting from earlier like experiences. Individual teacher adaptation of the guide to the maturity levels and other characteristics of their classes should make the repeated concepts more meaningful.

Minimum time recommended for implementation of these units are as follows: five periods in grades 5 or 6; three periods in grade 7; three periods in grade 10.

Optimal time recommended: eight periods in grades 5 or 6; five periods in grade 7; five periods in grade 10.

Priority "units" as indicated are those which are likely to have greatest impact and which should be included in minimum time situations.

Grades one through four. Should contain sharp and repeated mention of smoking hazards whenever these may be appropriately correlated with related studies. Specific suggestions appear in the Appendix pages

Correlation of smoking education with other subjects is strongly recommended whenever appropriate. Specific ideas for correlation with various subjects areas are included in the Appendix V, pages 66-100

	GRADE LEVEL		
	Elem.	Jr.	Sr.
BEHAVIOR			
Expresses an understanding of good health as a basis for meaning and enjoyment in life.	x	x	x
CONCEPTS			
I must maintain my health in order to achieve my ambitions and enjoy life.	x	x	x
CONTENT			
Goals in life	x	x	x
Things enjoyed most	x	x	x
Effects of illnesses	x	x	x
People who get old soon and lose functions early	x	x	x
EXPERIENCES			
Discussion: What would I like to be, to do, to achieve?	x	x	x
What activities do I enjoy most?	x	x	x
What games and sports would I like to continue to play all my life?	x	x	x
Remember when I was ill last? Couldn't wait to get well and get back to work and play?	x	x	x
Do some people "get old" early in life? This makes them inactive and unhappy?	x	x	x
How healthy can you be?	x	x	x
Writing: On any of the above.	x	x	x
Bulletin Board: Collage of "What we hope to do, to be, to enjoy."	x	x	x
RESOURCES AND MATERIALS			
Home, school, teacher, friends, experiences, magazines, newspapers, health texts.	x	x	x

	GRADE LEVEL		
	Elem.	Jr.	Sr.
BEHAVIOR			
Acts in many ways to maintain health (exercise, safety, sleep, rest, eating, etc.)	x	x	x
CONCEPTS			
My health is largely up to me.	x	x	x
I must make the most of what I am and what I am becoming.	x	x	x
Better choices and decisions are rewarded with better living.	x	x	x
CONTENT			
Meaning of past experiences and decisions.	x	x	x
Opportunities today and tomorrow.	x	x	x
Growing up to be responsible.	x	x	x
Review of body systems with examples for care.	x	x	x
EXPERIENCES			
Discussion: My most recent bad health decision and what it cost me.	x	x	x
No one's perfect but . . .?	x	x	x
Game: Divide room into two groups facing each other. Teacher moderates. One person in one group names a body system and person in other group cites a specific decision to protect that system. Then reverse. De-emphasize competition, but keep casual track of misses. No system can be repeated until two other systems have been named. Same decision may not be made twice. Discuss items that seem to call for elaboration.	x		
Cartoon: Rhymes, slogans, etc., on theme of rewards for good decisions and penalties for poor decisions.		x	
Models: Of health at various ages. (Reports and discussion) Decision and behavior contributing to health of models.			x

RESOURCES AND MATERIALS

Environment, experiences, Health 5, especially pages 202-216. Health 6, especially pages 198-209, Health For All, books Seven and Eight.

	GRADE LEVEL		
	Elem.	Jr.	Sr.
BEHAVIOR			
Identifies and demonstrates appreciation for the health of the cardiovascular and respiratory (CVR) systems as vital to the kind of life hoped for.	x	x	x
CONCEPTS			
An active, happy life depends on the continuing sound functioning of the heart, circulation, and lungs.	x	x	x
CONTENT			
Review heart, circulation, respiration in terms of activities enjoyed.			
1. Heart pumps blood throughout body to supply tissues with oxygen and nutrients needed for growth and activity.	x	x	x
2. Blood vessel system carries oxygen and nutrients to body cells and carries wastes away.	x	x	x
3. Respiratory system makes oxygen available to the blood and carries by-product gas carbon dioxide away.	x	x	x
4. Systems function automatically to meet demands.	x	x	x
EXPERIENCES			
Question: What two systems of the body are especially important in maintaining stamina for the active life most of us say we want?	x	x	x
Progressive Discussion: Start with a "favorite" vigorous activity that is enjoyed by people of almost all ages.	x	x	x
Have pupils one by one describe what's going on in the CVR system.	x	x	x
Lead and correct as needed but don't force logical sequence. Make notes of contributions on half sheets. Arrange in sequence and summarize.	x	x	x
Use drawings of CVR systems in Smoking Education Kits or others. Extreme detail not important.	x	x	x

		GRADE LEVEL		
		Elem.	Jr.	Sr.
EXPERIENCES (continued)				
Demonstration:	Heart rates at rest and after exercise.	x	x	x
	Respiration at rest and after exercise.	x	x	x
	Discuss adaptation to need.	x	x	x
Questions:	What would happen if lungs lost much of their function?	x	x	x
	What would happen if heart became less and less able to do its job?	x	x	x
	What if blood vessels became narrowed and couldn't supply as much blood to the cells?	x	x	x
	Lead to verbalization of concept that total capacity to enjoy life would thereby be handicapped.	x	x	x
RESOURCES AND MATERIALS				
Health 5 pages 142-156, 182-197. Health For All, book eight, pp. 195-211. Drawings of Heart and Circulation, Respiratory System. (Available from American Heart Association and Tuberculosis and Health Association.) (In Smoking Education Kit)				
Films	Circulation, (Heart Association)		x	x
Slides	Circulatory System (Heart Association)	x	x	x
Pamphlets	"About Your Heart and Bloodstream" (Heart Association)	x		
	"The Heart - Perpetual Motion Pump" (Heart Association)		x	x
	"Ways to Keep Well and Happy" (Tuberculosis Association)	x		

UNIT 4

	GRADE LEVEL		
	Elem.	Jr.	Sr.
BEHAVIOR			
Identifies requirements for maintenance of CVR system and acts to meet these requirements.	x	x	x
CONCEPTS			
My CVR system thrive on vigorous physical activity, but deteriorate with disuse and abuse. What I do to keep them in top working order makes the difference.	x	x	x
CONTENT			
1. Growth and maintenance through			
a. Nutrition	x	x	x
b. Sleep	x	x	x
c. Regular hard play and exercise (almost impossible to over-exercise a normal body)	x	x	x
2. Avoidance of abuse			
a. Lack of above	x	x	x
b. Air pollution	x	x	x
c. "Personal air pollution" (Cigarette smoking)	x	x	x
EXPERIENCES			
Discussion: What's necessary to build CVR system?	x	x	x
List: What recreational activities would build CVR systems.	x	x	x
What recreational activities are fun, but wouldn't help CVR system.	x	x	x
Discussion of activities listed	x	x	x
List circumstances and practices which would hurt CVR system.	x	x	x
Underline importance of personal decision to be active or not, to smoke or not.	x	x	x
Bulletin Board pictures of activities and choices which build CVR system and activities which build these systems.	x	x	x
What have you done for (to) your CVR system today?	x	x	x
Encourage focus on abuse of smoking as general concept.	x	x	x
Interview physicians on how to build and maintain CVR systems. Ask specifically about effects of smoking. Use interview responses for socio-drama, discussion, reports, etc.	x	x	x
RESOURCES			
Same as preceding plus Health 6, pages 198-211; Health For All - Book Seven pages 111 - 118.	x	x	
Filmstrip: "I'll Choose the High Road", American Cancer Society.	x		

	GRADE LEVEL		
	Elem.	Jr.	Sr.
BEHAVIOR			
Expresses concern about the threat to life and health of cigarette smoking. Makes a preliminary commitment to no-smoking. Begins individual and group study of the issue.	x	x	x
CONCEPTS			
Cigarette smoking is a major destroyer of health and of life. Cigarette smokers have more illness and live shorter lives on the average than persons who don't smoke. One who chooses not to smoke is protected from its dangers.	x	x	x
CONTENT AND EXPERIENCES			
Overview of Problem of Cigarette Smoking (Introductory statement - Idea sequence important)	x	x	

Most of you are aware that smoking is harmful and have already decided that you will never be a smoker. Even though it may be several years before this decision will be important to you, you are not too young now to decide that you never want to smoke. That's a very wise decision for a lot of reasons.

First of all, cigarettes gradually destroy the respiratory systems of many thousands of people. Cigarettes cause very serious diseases like bronchitis and emphysema. People who have these disease can no longer enjoy the active living that all of you are so interested in. And eventually these diseases can KILL.

Another disease which you all know is related to smoking is lung cancer, in which useless and destructive cells crowd out healthy cells in the lungs and eventually kill the smoking victim. In fact, a lot of diseases and disorders are related to cigarette smoking. It's so serious, in fact, that doctors and many others are greatly concerned and are doing all they can to see to it that you don't become smokers. But it's not easy.

All of you, I hope, have already made up your minds never to be smokers, but as you get older pressures to get you to start may be more than you can resist unless you really understand why not smoking is so very important.

Yes, a lot of people smoke, and that's one of the problems. It seems like such a "right" thing in some respects. Maybe your parents or relatives smoke, or maybe an older brother or sister. Most people who smoke began before they knew the dangers and most smokers would like to stop, but it's not easy to stop -- so you can see can't you why it's better never to start.

	GRADE LEVEL		
	Elem.	Jr.	Sr.
But in the next few years you will be tempted. Older boys and girls will make it seem fun, exciting, a way to be "one of the gang' and you will be tempted. If you give in, that decision could cost you a very great deal indeed.			
So we're going to really study about smoking, so when your decision not to smoke is challenged you'll be able to say something like "no, thanks, I'd rather just breathe, and keep my heart, lungs and life together."	x	x	
Bulletin Board and/or Scrapbook work on smoking and health for period of time prior to beginning of concentrated teaching unit.	x	x	
Outline Board or Door or Room with health warnings clipped from the sides of cigarette packs.	x	x	
Set up Committee for work with Kit materials. Committees organized along lines of major concepts areas in Unit with activities and worksheet questions selected from those suggested in the Guide Unit 1.	x		
Possible Committee Divisions			
1. Physiological effects and health hazards (one or two committees)	x		
2. Aesthetics and economics	x		
3. Why people begin and continue to smoke.	x		
4. Cigarette advertising and propaganda	x		
5. Questions of right and wrong (legal and moral)	x		
Distribute work sheets prepared from materials to each person in each committee.	x		
Introduce class to table of materials to be used.	x		
Indicate time that will be devoted to this study.	x		
Suggest that pupils read all the items on the worksheet first and answer them in any order.	x		
If possible allow students to move about and discuss their findings with others as they proceed.	x		
Remind pupils of teacher availability to help.	x		
Alternatives To Committee Approach			
1. Use films and film strips suggested and review highlights of items on worksheets in discussion.			
2. Read Big Beautiful Air and Stuff (if available) and discuss as interest dictates.			
a. Teacher reads about one third on each of three days.			
b. Pupils take turns reading parts aloud.			
c. Individual reading.			
d. Follow ideas presented on the drawings of respiratory and cardiovascular systems.			

	GRADE LEVEL		
	Elem.	Jr.	Sr.
3. Use questions on the committee worksheets for teacher-led discussions. a. Distribute kit materials at random. b. Place several key questions on the board. c. Direct students to study the materials and prepare notes for oral answers. d. Have reports and discussions when answers to all questions listed have been prepared.	x		
At completion of each session elicit an expressed reiteration of the no-smoking commitment. Example: "How many of you are more convinced than ever that your decision never to be a smoker is a smart choice?"	x	x	x
Suggest that students begin thinking of doing cartoons, jingles, rhymes, slogans, etc. expressing their views on smoking to the class.	x	x	

RESOURCES

Materials from the "Smoking Education Kit," Film: "The Huffless, Puffless Dragon", American Cancer Society, Ohio Department of Health, Division of Chronic Diseases.	x		

	GRADE LEVEL		
	Elem.	Jr.	Sr.
BEHAVIOR			
Demonstrates comprehension of the overwhelming statistical evidence linking cigarette smoking with increased disability and premature death.	x	x	x
CONCEPTS			
The statistical evidence of the hazards of smoking is convincing. Persons who smoke for a period of years take very serious health risks.	x	x	x
CONTENT			
Unless changes in smoking behavior come about:			
1. One million students now in school will die prematurely of lung cancer related to smoking.	x	x	x
2. Five million students will die prematurely of other smoking related disorders.	x	x	x
3. Smoker/Non-Smoker death rates for various disorders (see tables in Kit).	x	x	x
4. Most smoking related deaths preceded by years of disability and suffering.	x	x	x
EXPERIENCES			
Review Findings of Surgeon General's Report of 1964 and 1967 (original or summary or from tables in Kit).	x	x	x
Prepare and present report on statistical evidence to class.	x	x	x
Discuss how statistical studies are conducted.		x	x
Exercise in problem solving from statistical tables and graphs	x	x	x
Construct tables and graphs from statistical materials.		x	x
Display graphs and tables.	x	x	x

Case problems life expectency at birth is about 70 years. A person starts smoking at 18 and smokes a pack a day until he dies of lung cancer at 60.

1. How many cigarettes did he smoke per day, per year, during his lifetime? _____
2. How long does it take to smoke a cigarette in minutes? _____
3. How premature was this man's death in days, hours, minutes. (Life expectency at birth is 70).
4. If we assume that smoking was responsible for his early death, how many minutes of his life did he pay for each cigarette smoked? _____

Students may work the problem and present it to the class or teacher may work problem with class.

RESOURCES AND MATERIAL	GRADE LEVEL Elem.	Jr.	Sr.
Fact summaries and tables in Kit.	x	x	x
Pamphlets in Kit.	x	x	x
Filmstrips: "To smoke or Not to Smoke", Cancer Society.		x	x
"The Time to Stop is Now", Cancer Society.		x	x
Films: "Smoke Anyone", Heart Association,		x	x
"Is Smoking Worth It?" American Cancer Society, Ohio Department of Health.		x	x

PRIORITY UNIT

UNIT 7

	GRADE LEVEL		
	Elem.	Jr.	Sr.
BEHAVIOR			
Demonstrates understanding of effects of smoking on the respiratory system.	x	x	x
CONCEPTS			
Cigarette smoking progressively irritates, damages, and destroys delicate tissues from the mouth and nasal passages to the air sacs.	x	x	x
The earlier one starts smoking, the more he smokes, and the longer he smokes, and the worse the damage.	x	x	x
Smoking related to respiratory infections, chronic bronchitis, and emphysema.	x	x	x
Damaged lungs reduce ability to enjoy active living.			
CONTENT			
Review functioning of respiratory system with effects of smoking at each appropriate point.			
1. Irritation of nerves and mucus glands.	x	x	x
2. Paralizes cilia.	x	x	x
3. Eventually destroys cilia.	x	x	x
4. Excess secretion and build-up of mucus.	x	x	x
5. Cough used as means to clean passages.	x	x	x
6. Thickening ("callousing") of walls of bronchi.	x	x	x
7. Irritation and infection--chronic bronchitis.	x	x	x
8. Clogging of bronchioles due to thickening and excess mucus.	x	x	x
9. Trapping of air in alveoli behind clogged bronchioles.	x	x	x
10. Eventual stretching and explosion of alveoli, reducing effective space for respiration.	x	x	x
11. Eventual destruction of elasticity of lung tissue.	x	x	x
12. Emphysema results from mass destruction of alveoli, eventually turning the victim into a respiratory invalid.	x	x	x
EXPERIENCES			
Individual, committee, or class work on review of function of respiratory system.			
1. Review normal function with diagrams.			
2. Add a cigarette to the diagram (lit cigarette may dramatize teacher-led review) and explain effects with illustrations from Kit.			

	GRADE LEVEL		
	Elem.	Jr.	Sr.
3. Liberal use of the "What if" question in teacher-led study.	x	x	x
Studies, graphs and tables showing excess deaths from chronic bronchitis and emphysema.			
Experiment: (To be done by student at home) Collect puff of inhaled smoke in handkerchief—compare stain - Discuss (See experiment No. 1 in appendix.)	x	x	
Experiment: Bubble smoke through water—taste water—Discuss chemicals and tars. (See experiment No. 3, appendix IV page 63.)	x	x	
Experiment: Bubble smoke through water with live fish. Observe results. Rescue fish in time! (See experiment No. 4, appendix IV page 64.)	x	x	
Discussion: What do you enjoy that someone with smoking damaged lungs couldn't enjoy? Why don't athletes and astronauts smoke? Does the future belong to people with sound breathing systems?	x	x	x

RESOURCES AND MATERIAL

Materials in Kit.

Lung Tissue Sections (normal and diseased). From T.B. and Health, Ohio Department of Health.	x	x	x
Films: "Smoking and You", Ohio Heart Association, Ohio Department of Health.		x	x

PRIORITY UNIT

UNIT 8

	Elem.	Jr.	Sr.
BEHAVIOR			
Traces the development of Lung Cancer in a cigarette smoker.	x	x	x
CONCEPTS			
Cigarette smoking is the major cause of lung cancer.	x	x	x
Persons who start smoking earlier, smoke more, and smoke longer have the greatest chance of getting lung cancer.	x	x	x
Chemicals in cigarette smoke irritates lung tissue and cause lung cancer.	x	x	x
Lung cancer almost always kills the victim.	x	x	x
CONTENT			
Cancer causing smoke particles (carcinogens) lodge in bronchi; alter cell growth; cancer cells grow berserk; crowd out and starve off normal cells; pieces break off and form other growths elsewhere; kill victim. Lung cancer death ratios for smokers and non-smokers.	x	x	x
EXPERIENCES			
Trace development of lung cancer using drawings. Compare growth of normal cells and cancer cells. Examine tables and graphs showing excess lung cancer mortality for smokers.	x	x	x
RESOURCES AND MATERIALS			
Kit Materials Plus: Health For All, Book 7 Pages 178–183 Health For All, Book 8 Pages 131–139			
Filmstrip: "To Smoke or Not to Smoke", Cancer Society		x	x
"Is It Worth It?"		x	
Bound Transparencies: "The Beleaguered Lung", available in some schools in class quantities or from Cancer Society.		x	x
Film: "From One Cell", American Cancer Society.		x	x

PRIORITY UNIT

UNIT 9

	Elem.	Jr.	Sr.
BEHAVIOR			
Explains how cigarette smoking affects and damages the heart and circulation.	x	x	x
CONCEPTS			
Cigarette smoking adds unnecessary stress to the heart and circulation causing wear and tear.	x	x	x
Smokers are more likely to have high blood pressure.	x	x	x
Smokers are more likely to have heart attacks.	x	x	x
Sound heart and circulation necessary for getting the most out of life.	x	x	x
CONTENT			
Review functioning of heart and circulation as affected by cigarette smoking.			
1. Carbon monoxide displaces oxygen in red blood cells.	x	x	x
2. Effects of nicotine			
a. Increases heart rates	x	x	x
b. Constricts arterioles	x	x	x
c. Increases blood pressure	x	x	x
d. Decreases peripheral blood flow	x	x	x
e. Pressure and rate increases place stress on the system.	x	x	x
3. Especially dangerous to coronary system			
a. Review coronary system.	x	x	x
b. Results of restricted coronary blood flow on heart function.	x	x	x
4. Alters blood platelets; predisposes to clotting and "heart attack."	x	x	x
EXPERIENCES			
Review O_2 and CO_2 gas exchange in alveoli; then show how CO replaces some of O_2.	x	x	x
Discuss O_2 supply to tissue.			
Illustrate constricted arterioles with drawing and explanation.			
Question: What happens in the "hose" when nozzle closes down?	x	x	x

	GRADE LEVEL		
	Elem.	Jr.	Sr.
Experiment: Check heart rates of smoker at rest before smoking (2 hour abstinence) and after smoking 2 cigarettes in a row. Record difference and discuss. (see experiment No. 2 in appendix.)		x	x
Interview a smoker and ask him if he is aware of 1. Increased heart rates. 2. Cold hands and feet after smoking. 3. Bring in results for discussion.	x	x	
Study, Report, Discuss charts and tables on smoking and heart disease.	x	x	x

RESOURCES AND MATERIALS

Kit materials plus those listed previously.
Sheet: "Cigarettes and Circulation.",
Heart Association.

UNIT 10

	GRADE LEVEL		
	Elem.	Jr.	Sr.
BEHAVIOR			
Expresses awareness of the interrelatedness of body organs and system and explains how physiological changes from smoking affect organs and processes other than CVR system.	x	x	x
CONCEPTS			
Cigarette smoking sets up physiological chain reaction that places organs and life processes in jeopardy throughout the body.	x	x	x
These effects are cumulative; they accelerate degenerative aging processes and impede the maintenance of organic integrity, cosmetic values, and functional efficiency.	x	x	x
CONTENT			
Smoking relationship to			
1. Cancer of larynx	x	x	x
2. Cancer of mouth	x	x	x
3. Cancer of esophagus	x	x	x
4. Cancer of bladder and kidney	x	x	x
5. Ulcers	x	x	x
6. Cirrhosis	x	x	x
7. Prematurity, low birth weights, and infant mortality.	x	x	x
8. Interrelatedness of organ system (breakdown in any system transferred throughout organism).	x	x	x
9. Premature aging.	x	x	x
EXPERIENCES			
Review table of expected and observed deaths for cigarette smokers.	x	x	x
Locate organs affected on Anatomy Chart.	x	x	x
Questions: How could smoking be related to these other diseases?	x	x	x
All cells of the body interconnected by what means? (blood, lymph, nerves)	x	x	x
Could we call smoke a foreign irritant and poison?	x	x	x
Could smoking cause one to "grow old" faster? How?	x	x	x
Wouldn't we all prefer to be as fit for life as long as we live?	x	x	x

RESOURCES AND MATERIALS

In kit plus those listed previously.

TOP PRIORITY UNIT

UNIT 11

	GRADE LEVEL		
	Elem.	Jr.	Sr.
BEHAVIOR			
Explains why people begin smoking and why they usually keep on smoking.	x	x	x
Expresses a strong commitment to no-smoking.	x	x	x
Resists, sucessfully, influences to decay his no-smoking commitment.	x	x	x
Expresses an anti-smoking commitment freely and appropriately.	x	x	x
CONCEPTS			
Young people begin to smoke because their environment and relationships with others make smoking seem the desireable thing to do.	x	x	x
People keep on smoking because (1) the environment contunues to support the practice; (2) the "acquired" habit continues to satisfy the needs that people have *learned* to associate with smoking; (3) psycho logical adjustment mechanisms function to minimize the negative aspects of a behavior (smoking) to which one is committed; (4) ignorance of the negative aspects of smoking and of the forces which support the practice.	x	x	x
Smoking will continue at present levels or grow unless large numbers of people begin reducing the acceptability of the practice by expressing anti-smoking feelings effectively.	x	x	x
CONTENT			
Forces which encourage taking up smoking.			
1. Curiosity and desire to explore.	x	x	x
2. Emulation of smokers (monkey see - monkey do).	x	x	x
3. Peer conformity -- makes him feel like "one of the gang."	x	x	x
4. Identity needs (to *be* somebody, feel grown up, one's own boss).	x	x	x
5. Immediate gratification (fun, kicks, pleasure, excitement, relaxation.)	x	x	x
6. Rebellion (appeal of doing that which one feels is disapproved by those from whom one would like to be independent).	x	x	x

	GRADE LEVEL		
	Elem.	Jr.	Sr.
CONTENT (continued)			
Supporting the habit.			
1. Some smokers *learn* to need to smoke when they feel good in order to "enhance" those "good" feelings.			x
2. Some smokers *learn* to need to smoke when they are unhappy to comfort these "bad" feelings.			x
3. Some smokers just have the bad habit without any particular or deep reason - they just smoke because they smoke.			x
4. A few smokers are deeply dependent (addicted) on smoking so that if they are not smoking, or knew they couldn't smoke, they would not be able to function well.			x
Problems of getting off the "hook."			
Smokers must either:			
1. Remain ignorant of the dangers;		x	x
2. Minimize the danger with self-deceptions;		x	x
a. "It can't happen to me"			
b. "Other things are worse"			
c. "What will be will be"			
d. "Health scare is exaggerated"			
e. "I'll take my chances"			
f. "I don't want to live forever"			
g. "I don't smoke that much"			
3. View themselves as being foolish in the face of the facts (a very difficult feeling to hold);		x	x
4. Admit being deeply dependent or addicted;		x	x
OR			
5. STOP SMOKING.		x	x
Smoker Reinforcement			
1. Others who smoke (especially persons who are "close")		x	x
2. Fear of not being able to stop		x	x
3. Saturation advertising which maintains cultural illusions of:		x	x
a. Social acceptability			
b. Safety			
c. Glamour, adventure, romance, pleasure, etc.			
4. "Satisfaction" in practice itself;		x	x
5. Relative absence of anti-smoking stimuli;		x	x
6. Taboos against social expression of anti-smoking positions (smoking socially accepted -- anti-smoking not accepted).		x	x

GRADE LEVEL

Elem.	Jr.	Sr.

EXPERIENCES

Discussion: (Before or after Case Problem)

1. Why do young people start smoking?
2. Does smoking mean one is grown up?
3. Are the "pleasures" of smoking "real" or "artificial"?
4. Does one have to smoke if his friends smoke?
5. Does one "choose freely" whether or not to smoke?
6. Is smoking sometimes appealing *because* it is forbidden among young people?
7. Do young people who begin smoking really understand the negative aspects of smoking?
8. Can one satisfy his curiosity about smoking without becoming a smoker?
9. Why do people continue to smoke even though they know it's so destructive?
10. Why can't some smokers comprehend how seriously damaging smoking really is?
11. What psychological tricks of self-deception do smokers use to protect themselves from the "truth" about smoking?
12. Why do we say that smokers are "hooked" on the habit?
13. What do smokers *learn* to get out of smoking that they have trouble living without?
14. Why do only smokers *need* cigarettes?
15. How do so many people smoking make it difficult for an individual to stop?
16. How does cigarette advertising make it difficult for people to stop smoking?
17. What illusions about smoking do cigarette ads create and support?
18. Why are there more forces which *encourage* smoking than which *discourage* smoking?
19. Why can smokers dirty up the air and people who prefer clean air not often express that preference?
20. How can a *fear of not being able to stop* smoking keep a person from *trying to stop?*
21. How could a person be hurt if he tried hard to stop smoking and couldn't?

Interview: Smokers and non-smokers, asking them how and why they started or didn't start; why and how they stopped; whether smokers wish they had never started, or would like to stop; whether they have tried to stop; how smokers feel about the possible health hazards, etc? Use responses reported as basis for discussion and analysis. Responses could be used to structure cases for socio-drama. x x x

GRADE LEVEL

Elem.	Jr.	Sr.

EXPERIENCES (continued)

Case Problem I: (Presented and/or played out in socio-drama).

The older kids in Rod's neighborhood club are fooling around with cigarettes. They get together in one of their houses, in a car, or somewhere else and practice smoking. There is usually a lot of fun and giggling.

Rod has been curious about smoking. His uncle and aunt smoke and several times he has taken a cigarette from one of their packs and looked at himself in the mirror with it. It makes him feel "grown up." Once he sneaked a puff from a lighted cigarette in an ash tray. It tasted pretty bad.

Now the older kids are sometimes saying "Kid, you're too young to smoke," and sometimes daring him to take a drag. Rod doesn't like to be teased or made to feel like a "baby," so he usually takes a puff when they dare him. But he knows he's too young to smoke and he knows the health dangers of smoking, and he really doesn't want to smoke. But the gang likes him and he's one of them, so . . .? x x

Case Problem I Analysis:

1. Does Rod have a problem?
2. What exactly is his problem? Can you put yourself in his shoes? Do you know how he must feel? What forces other than the gang's influence are working on Rod?
3. What alternatives are available to him? Can he refuse to smoke and stay in the gang? Is it possible for Rod to choose not to smoke?

Case I continued (presented and/or played)

This afternoon, the leader of the club will say to Rod, "Well, Rod, we've talked about it and decided that you're big enough to smoke and so we're going to teach you to inhale and everything. Here's a cigarette, I'll light it for you."

Analysis of situation:

Does Rod have a choice? What if he says he doesn't want to smoke? Is there anyway he can get out of this without smoking and without being rejected by the club?

GRADE LEVEL

	Elem.	Jr.	Sr.
EXPERIENCES (continued)			
Case Problem II (presented or played out in socio-drama)		x	x

Jill and her girl friends get together to gossip, fix their hair, etc. Sometimes they make believe they're grown up and have their own homes and children. Often when they're together one or another of the girls will place her fingers to her mouth as if holding a cigarette and dramatize the "whole thing." A couple of times Jill has taken a cigarette from her mothers pack and used it as an acting prop. It's fun, but she knows from what she has learned at school that she's too young to smoke and that she would be better off if she never smoked. Still, playing the role of a smoking adult has its appeal. Yesterday, Gwen lit a cigarette when the girls were alone together. At first the girls were shocked, but then they thought it hilarious and rolled on the floor laughing. Then Gwen said, "Let's all smoke."

Case Problem II Analysis:
What makes smoking so appealing? Why do girls and boys sometimes imagine themselves as smokers and sometimes look in the mirror and "play smoker?" Will the girls all follow Gwens lead and smoke? Will their knowledge of the dangers of smoking be sufficient to prevent their becoming smokers?

Case Problem II continued:

Describe and/or play out the conclusion.

Case Problem III (presented and/or acted out in socio-drama)		x	x

Frank has been hoping and trying to make the team. Training is strict with carefully prescribed rules for sleep, exercise, and eating. The Coach has emphasized especially the no-smoking rule. But Frank didn't make the team. The Coach was nice about it and the other guys sympathized with Frank. Still Frank is deeply disappointed – it's really "eating him up." On his way home he runs into a couple of guys he knows. They are smoking. They ask Frank what's wrong and he tells them. They share his disappointment and offer him a cigarette. Since he didn't make the team and because he certainly needs *something now*, Frank is tempted to smoke.

	GRADE LEVEL		
	Elem.	Jr.	Sr.

EXPERIENCES (continued)

Case III Analysis:

Do you understand how Frank feels? *Should* Frank feel this way? What does Frank need at this point? Will smoking really give him what he needs? How might smoking *seem* to help Frank at this point? How can Frank get what he needs and not smoke?

Bulletin Board: Boy and girl in the center with forces which encourage smoking listed separately on the right, and forces and reasons for not smoking on the left. Caption like - "The Right Decision -- Can YOU Make It?" x x x

Case Problem IV:

Sally is 21 and she smokes. She started smoking when she was seventeen. She is very much interested in a boy named Chuck, who does not smoke and who prefers that Sally not smoke. She would like to stop, but it's hard. When Sally is with Chuck she can usually do without cigarettes, but sometimes she really feels like smoking, so she does. Chuck tells her he doesn't like it. Sally smokes most when she's with girl friends who smoke, or when she feels nervous or anxious about something. She also gets a special urge to smoke when she sees cigarette ads on T.V. or when she sees people in romantic or sophisticated situations smoking. She thinks about the health hazards of smoking sometimes, especially about how her smoking could affect her children but she doesn't believe that the dangers of smoking are as serious as she has heard. Chuck is the only person in Sally's life who makes a point of her smoking. x

Case IV Analysis:

Can you imagine the predicament Sally is in? What does she "owe" Chuck and his preference that she not smoke? Does Chuck have a right to expect Sally to stop smoking? Why? Should Sally be concerned about how her smoking may harm her babies, or that her smoking may some day encourage them to smoke? Why does Sally feel like smoking, especially when she's with friends who smoke, or when she sees someone smoking on T.V.? Will Sally stop smoking? What will she have to overcome to be able to stop? If you were Sally or Chuck, how would you feel about these questions? What would you like to do if you were in their place? Could you do what you would like most to do?

GRADE LEVEL

Elem. Jr. Sr.

EXPERIENCES (continued)

Case Problem V:

Bruce is 17 and has been smoking for about two years. He has a part time job and buys his own cigarettes. He knows that smoking is illegal at his age, but he says "who cares, I never heard of the fuzz breaking a guy for smoking. Besides, I like it, it's my life and no one's going to tell me to stop. Yeah, I know about lung cancer and those other things that cigarettes are supposed to cause, but I'll take my chances. There's an old guy where I work who's been smoking for about 40 years and he's still going strong. If cigarettes are so bad, why hasn't he cashed in? What do I get out of smoking? Well, it helps me relax. I just feel good when I light up and I like the taste. Besides, what would I do at the smoke break at work if I stopped? Oh, I may stop some day when I get older and it doesn't mean much to me anymore, but right now I intend to continue smoking." x

Case V Analysis:

Can you understand how Bruce feels and why he reacts as he does? Is it ok for him to smoke at his age? Is Bruce hurting himself by continuing to smoke? How? Is is ok for him to "take his chances" if he feels like it? Do you suppose it will be easier for him to stop smoking later? Why has the "old guy" apparently not been hurt by smoking? Could he already be damaged more than is apparent to Bruce? How? If you were Bruce, would you react as he has? If not, how would you react?

Case Problem VI:

Flip and Judy are 16. They have both tried smoking but it tasted pretty bad. They are also bothered by cigarette smoke from smokers in closed rooms. Both understand the health risks of smoking and neither intends to smoke. Still some of their friends smoke and the opportunity and encouragement to start is constantly before them. Flip is on the cross-country team and realized that training and smoking don't mix. Judy has no athletic ambition, but she does enjoy active sports. Her mother who is forty and has not smoked can keep up with Judy in most sports. Both Flip and Judy have plans for active, vigorous lives and careers. Smoking just doesn't fit their idea of "the good life." x

	GRADE LEVEL		
	Elem.	Jr.	Sr.
EXPERIENCES (continued)			
Case VI Analysis:			
Would you like to be like Flip and Judy? Why? Should they never have tried smoking? They are bothered by smoke in closed rooms, but do they have any choice than to bear it or get out? Do smokers have a right to "dirty up" the air? What might Flip and Judy do except bear it or get out? Do you suppose Judy's mother would be likely to excel in sports had she been a smoker? Why is their decision to avoid smoking so very important to their future?			
Write letters: Upper grade (9-12) students write letters to students in lower grades explaining the pressures to smoke they will face and offering suggestions for withstanding those pressures.			x
Skits presented: to lower grades with same purpose.	x	x	x
Decision Exercise: Have students draft brief statements on (1) Why smoking might appeal to people; (2) Why smoking is a poor practice to begin. Ask them to weigh the advantages and disadvantages and discard the statement of the choice they reject. Express openly the choices made. This crystalizes the no-smoking commitment and gives this choice strong social support.	x	x	
RESOURCES AND MATERIALS			
1. Have questions and cases duplicated for student, individual and group study and discussion.	x	x	x
2. Cigarette ads clipped from magazines.	x	x	
3. Health 5 pages 202–217	x		
4. Health 6 page 95	x		
5. Health For All Book Seven, pages 178–181, 246–247		x	
6. Film: "Point of View" (T.B. and Health Assoc.)			x
7. "Breaking the Habit", Ohio Department of Health, American Cancer Society.			x

	GRADE LEVEL		
	Elem.	Jr.	Sr.
BEHAVIOR			
Expresses a preference for clean air and asks smokers, politely, to leave or put out their cigarettes when their smoking bothers him.	x	x	x
CONCEPTS			
Smokers have no right to inflict smoke-laden air on others without asking their permission.	x	x	x
Persons who are bothered by the smoking of others have a right to ask smokers not to violate their preference for clean air.	x	x	x
CONTENT			
Smoking Rights and Etiquette:			
1. Ask permission of those around you.	x	x	x
2. Use ash trays and see that smoke doesn't annoy others.	x	x	x
3. Respect the rights of others to clean air.	x	x	x
Rights and Etiquette for non-smokers:			
1. Have a right to expect smokers to consider their comfort.	x	x	x
2. May ask a smoker politely not to smoke if it bothers him (in a car, room, elsewhere).	x	x	x
EXPERIENCES			
Discussion: Do smokers have a right to smoke when doing so would bother others. What rules of good manners would you advocate for smokers and for non-smokers who wish to express their preference?	x	x	x
Socio-drama: Construct one or more situations involving smokers and non-smokers in the same closed space, play them out and discuss the problems and implications.	x	x	x
RESOURCES AND MATERIALS			
1. Health 5, pages 202–217	x		
2. Health 6, page 95	x		
3. Health For All, Book Seven, pages 178–181, 246–247		x	
4. Film: "Breaking The Habit", Ohio Department of Health, American Cancer Society.			x

PRIORITY UNIT

UNIT 13

GRADE LEVEL

	Elem.	Jr.	Sr.
BEHAVIOR			
Describes the aesthetic and unaesthetic features of cigarette smoking.	x	x	x
CONCEPTS			
Cigarette smoking provides a means for experiencing and expressing certain aesthetic views and values.	x	x	x
Cigarette smoking has unaesthetic effects and overtones.	x	x	x
CONTENT			
Positive aesthetic values of smoking:			
1. Graceful cigarette lighting and smoking "ritual."	x	x	x
2. Emulation of aesthetic associations promoted by cigarette advertising (being at ease, casual, glamorous, adventuresome, etc.)	x	x	x
3. Patterns of smoke curling from cigarettes.	x	x	x
4. Enjoyment of smell, taste, oral gratification.	x	x	x
5. "Pleasant" irritation of air passages upon inhaling.	x	x	x
6. Social values of offering, receiving, lighting, smoking.	x	x	x
7. Comfort and relaxation claimed by smokers.	x	x	x
Negative Association and Effects:			
1. Air pollution (social and personal).	x	x	x
2. Odor on breath, clothes, hands, etc.	x	x	x
3. Smokers cough.	x	x	x
4. Ashes and butts.	x	x	x
5. Irritation of eyes.	x	x	x
6. Distrubs others.	x	x	x
7. Fire hazard to clothes, fields, forests, buildings.	x	x	x
8. Stains on fingers and teeth.	x	x	x
9. Dulling of smell, taste, appetite.	x	x	x
EXPERIENCES			
Discussion - Essays: What is it about smoking that makes it seem attractive to some people? What is the nature of the "pleasure" that smokers claim for the practice? Do you think that there are some qualities of smoking that make it beautiful or attractive? What are some of the unattractive features of smoking? Does smoking ever disturb the pleasant qualities in an environment? How? What do smokers do typically that is not attractive? Would you feel differently about smoking if it caused your hair to fall out or if it caused acne or obesity?	x	x	

	GRADE LEVEL		
	Elem.	Jr.	Sr.
EXPERIENCES (continued)			
List on Board: The positive aesthetic aspects of smoking on one side and the unaesthetic aspects opposite. Discuss each one and compare lists. Do the positive aspects outweigh the negative?	x	x	
Case Sharing: Students describe briefly smoking situations observed which exhibit positive aesthetic appeal or negative aesthetic effects.		x	x
Compare: Positive aesthetic associations promoted by cigarette ads with observed examples of gross unaesthetic associations.	x	x	x
Cartoons or Slogans: Using cigarette ads as point of departure for reversing positive association. At least one illustration for each negative association above.	x	x	x

RESOURCES AND MATERIALS

Cigarette ads, individual experiences, posters, cartoons, slogans constructed by students.

UNIT 14

	GRADE LEVEL		
	Elem.	Jr.	Sr.
BEHAVIOR			
Describe the economic (personal and national) costs and implications of cigarette smoking.	x	x	x
CONCEPTS			
Tobacco growing, processing, promotions, sales, and taxation represents a substantial and powerful national economic entity.	x	x	x
Individual costs of smoking can, over a period of time, be sizable and represents a destructive drain on low income budgets.	x	x	x
Individual and family costs of medical care for smoking related illness, and of lost income from smoking related disability and death is frequently sizable and can be devastating to family budgets.	x	x	x
CONTENT			
Tobacco Economics			
1. Retail expenditures for cigarettes - 7 Billion plus dollars per year.	x	x	x
2. Total Taxes collected from cigarette sales (Federal, State, Local) 3 Billion plus dollars per year.	x	x	x
3. 70 million smoking Americans consume about one pack per day each.	x	x	x
4. 12 million excess chronic conditions yearly related to cigarette smoking.	x	x	x
5. One million excess man days of restricted activity per year related to smoking.	x	x	x
6. Social Security Administration pays 60 million dollars per year in disability to emphysema victims alone.	x	x	x
7. Estimated to be 300,000 premature deaths per year related to smoking.	x	x	x
8. 300 million dollars per year spent on cigarette advertising.	x	x	x
EXPERIENCES			
Calculate: (1) Cost of cigarettes per year for "pack-a day" smokers at current cigarette costs. (2) Calculate cost total for 40 years of smoking. (3) Calculate total accummulated value of an identical amount had it been invested in a savings account year by year. Create your own problems related to the personal and national economics of smoking.	x	x	

	GRADE LEVEL		
	Elem.	Jr.	Sr.
Discussion - Essay: What could one purchase with the money saved by not smoking for various periods of time? Why doesn't the Government attack the problem of cigarette smoking more vigorously than it does?		x	x
Investigate Cost of full page ad in popular magazines? Profit realized by local broadcaster from cigarette ads per year.		x	x
Write or meet with City Councilman asking them why laws regulating sales and use of cigarettes by persons under 18 are not enforced?		x	x
Case Problem: Mr. Walt who began smoking when he was 18 years old has smoked for 30 years. He has missed about five days of work per year for the past 20 years due to respiratory complaints. Ten years ago his doctor advised him to stop smoking. He has not stopped. Now at 48 years of age, he has chronic bronchitis and emphysema. He has had to quit work and must remain near his oxygen tank in order "to get his breath" several times each day. The family savings are almost exhausted due to the cost of Mr. Walt's illness.		x	x
Discussion Questions on Case: Until now, how much lost productivity has Mr. Walt suffered as a result of smoking? What will the family do when the savings are gone? Mr. Walt was earning 10 thousand dollars per year until he had to quit working. He was 17 years away from retirement. How much will his lost earning power cost the family? How much will Medical care for his illness cost until Mr. Walt dies? Do you suppose Mr. Walt believes that the pleasures of smoking have been worth the costs he is paying now?			x
Discussion Questions: Does the fact that many people earn their livings through the tobacco industry justify the suffering and economic losses incurred by many smokers? Would local, state and national governments be in budget difficulties if it were not for tobacco tax revenues? If they were, would this justify the losses and suffering of smokers and their families?			x

	GRADE LEVEL		
	Elem.	Jr.	Sr.
Case Problem (present or socio-drama)			
Phillip is 16 years of age and has been smoking in the afternoons with his friends for several months. He comes home one afternoon and announces to his parents that he sees no reason to hide the fact that he's smoking and that he would like his allowance increased in order to buy cigarettes.			x
Analysis: It is illegal for Phil to smoke. Should his parents give him permission to break this law? Is Phil right in being honest with his parents? If you were Phil's parents how would you respond? Should his parents increase his allowance to buy cigarettes?			
RESOURCES AND MATERIALS			
Statues on Sale and use of Tobacco by Ohioan's under 18 years of age.	x	x	x
Letters from or meetings with city councilman on the subject.		x	x

PRIORITY UNIT

UNIT 15

	GRADE LEVEL		
	Elem.	Jr.	Sr.
BEHAVIOR			
Identifies the nature and extent of the appeals of cigarette advertising.	x	x	x
Expresses opposition to the destructive effects of cigarette advertising in appropriate ways and at appropriate times.	x	x	x
CONCEPTS			
The economic power of the tobacco industry enables it to promote its products on a gigantic scale.	x	x	x
Motivational research is utilized in cigarette advertising to link smoking with positive and desireable associations.	x	x	x
Until one understands the persuasive techniques used in cigarette advertising, he remains a rather helpless victim to the repeated appeals.	x	x	x
In order to minimize the effects of cigarette advertising, individuals who understand its power and appeal must *express* their resistance to these appeals strongly and repeatedly.	x	x	x
CONTENT			
300 million dollars per year spent on cigarette ads. 20 thousand plus dollars to make one average cigarette commercial. 10—25 thousand dollars to run ad on prime time network T.V. 50 thousand dollars to run full page ad in nationwide weekly magazine.	x	x	x
Psychological techniques utilized:			
1. Primacy (first associations with smoking are positive)	x	x	x
2. Recency (most recent associations positive)	x	x	x
3. Repetition and volume of exposure	x	x	x
4. Associations with deep needs and "most desired" images.	x	x	x
a. warmth and love			
b. glamour, romance, sex			
c. stylish			
d. adventure			
e. youth and beauty			
f. pleasure and success			

	GRADE LEVEL		
	Elem.	Jr.	Sr.
g. oral gratification			
h. implied warranty and safety (filters, lower nicotine and tars, etc.)			
i. sociability			
j. something for nothing (coupons, longer length, etc.)			
k. band wagon (everybody's doing it)			
l. "He–manish" or "womanly"			
m. status (pack colors, symbols, associations)			
n. catch phrases, slogans, tunes, etc.			
o. smoking in popular drama			
5. Intra–industry competition compounds volume of exposure and effects on consumers.			x
Questions of Ethics			
1. Radio and TV stations licensed to operate in public interest.			x
2. Advertising restricted on some "less damaging" products (hard liquor, "intimate" products)			x
3. Advertising as manipulation of people to practice a health damaging habit.			x
Efforts to restrict cigarette ads:			
1. Self–policing by tobacco industry?			x
a. no persons under 25 years old in ads.			x
b. no testimonials by athletes.			x
c. no direct appeals to the young			x
d. no ads in college papers			x
e. no promotions on college campuses			x
2. Health warnings on packs			x
3. Proposals to ban cigarette ads from TV			x
4. Proposals to provide "equal" opportunity for smoking education			x
Real-life advertising			
1. 70 million Americans smokers smoking one billion, 400 million cigarettes every day.			x
2. Smoking is noticeable –– non–smoking is not apparent (seems like "everybody smokes")			x
Smoking Education			
1. Little more than 2 million dollars invested in smoking education per year.			x
2. Educational efforts overwhelmed by cigarette ads and popularity of practice.			x

	GRADE LEVEL		
	Elem.	Jr.	Sr.
EXPERIENCES			
Exercise: Critize cigarette ads, identifying nature of appeals and techniques used.	x	x	x
Calculate amount spent for cigarette advertising per American per year. Who pays for those ads?		x	x
Calculate dollars for cigarette ads per excess death related to cigarette smoking (300 thousand excess deaths per year).		x	x
Calculate how much an average pack–a–day smoker pays per year for the advertising that sells him and others cigarettes.		x	x
Discussion-Essay -- "It is almost literally true that the consumer smokes both the cigarette and the advertising which induced him to become and remain a smoker."	x	x	x
Is the glamor, romance, adventure, etc., associated with smoking in ads real or illusory? Explain.	x	x	x
Who pays for cigarette advertising? (immediately -- in the long run)?		x	x
Why may cigarettes be advertised on television and whiskey cannot?			x
Before 1955 the cigarette advertisers claimed that their efforts "built" the cigarette industry by gettig new smokers early. After 1955 they claimed their ads merely "inform" smokers and cause them to change brands. What do you believe?			x
Do you believe that the tobacco industry would prefer that individuals have a "free choice"?	x	x	x
Why do many U.S. Congressmen oppose bans on cigarette advertising?			x
Should smoking education be given reasonable time on radio and TV?		x	x
How does smoking education differ from smoking ad–vertising?		x	x
Why is a non–smoker not a living anti–cigarette ad?			x
How do you feel about the few advertising agencies and advertising men who have refused to handle tobacco accounts?			x
Should cigarette ads include health warnings?	x	x	x

	GRADE LEVEL		
	Elem.	Jr.	Sr.
EXPERIENCES (continued)			
Should cigarettes be taxed to pay for smoking education on TV?			x
Write your congressmen asking their views on cigarette advertising and their positions on one or more of these issues. Express your own views on the subject and your suggestions on how the problem might be handled.		x	x
Write a local broadcaster and ask his views on these "tough" questions.		x	x
Create your own anti-cigarette ads to display on bulletin boards. Use the same techniques used by the pro-cigarette ads. Act out and/or record 15-30-45 second "spots."	x	x	x
Example: Ask "what is smoking really like" and create "far out" or "wierd" answers such as "sucking your thumb" or "being a giant and inhaling from a chimney."			
Organize a school-wide anti-smoking campaign or smoking "protest" movement.			x
RESOURCES AND MATERIALS			
1. Film: "Too Tough To Care", Ohio Department of Health.			
2. Replies from letters to congressmen and local broadcasters.		x	x

UNIT 16

GRADE LEVEL

	Elem.	Jr.	Sr.
BEHAVIOR			
Expresses how cigarette smoking may be considered a serious moral issue.			x
CONCEPTS			
In view of the widespread destructive effects of cigarette smoking, the practice may be considered a symbolic anti-life behavior.			x
CONTENT			
Review evidence of morbidity related to cigarette smoking.			x
Review aesthetic disadvantages of smoking.			x
Review power of advertising and the industry in overwhelming and masking the negative side.			x
Smoking as a "self-destroying" practice.			x
Individual smoking behavior as an inducement for others to smoke and continue smoking.			x
EXPERIENCES			
Discussion and Essays: Might life supporting behavior be considered moral behavior while anti-life behavior be considered immoral? What are some examples of pro-life and anti-life behavior? To what degree is an individual responsible morally for protecting his own life and health and that of others? Is it morally defensible for one to begin and continue a practice which he knows to be destructive of his health and which he knows encourages others to do likewise? Does the social acceptance of cigarette smoking make the practice more defensible morally? Does the fact that the damage from cigarette smoking usually occurs over a period of years make its anti-life nature more defensible morally? What is the moral responsibility of smokers who through careless use of cigarettes cause fires and destruction of life and property?			x
How would you respond to these arguments? No one's a saint and "normal" people do all kinds of things which are not good for them. "It's immoral only if I feel guilty about it." "It's my life and I can do with it what I please." "If my smoking causes you to smoke, that's *your* problem regardless of how young you may be." "Everybody dies of something and maybe the pleasures of smoking			

	GRADE LEVEL		
	Elem.	Jr.	Sr.
justify the destructive effects of smoking." "Cigarette advertising is informative, not manipulative." "Each person chooses freely whether or not to be a smoker and it's not a moral issue."			x
Debate using arguments such as those above.			x
Bulletin Board using the moral issue as a theme.			x

UNIT 17

	GRADE LEVEL		
	Elem.	Jr.	Sr.
BEHAVIOR			
Encourage smokers to stop.	x	x	x
CONCEPTS			
Each individual who understands the problems of cigarette smoking has an obligation to discourage the practice whenever and wherever possible.	x	x	x
CONTENT			
How to help smokers stop smoking:			
1. Let them know you care about them.	x	x	x
2. Because you care ask them to stop.	x	x	x
3. Ask them to let you explain why smoking is harmful and what they would gain by stopping.	x	x	x
4. DO NOT CRITICIZE their smoking.	x	x	x
5. Be especially loving to them when they are *not* smoking.	x	x	x
6. Leave the room and/or ignore them when they smoke.	x	x	x
7. Play a game criticizing cigarette ads with smokers.	x	x	x
8. Remind them not to smoke only if they say it's all-right for you to do so.	x	x	x
9. Suggest that they join a group that's trying to quit.	x	x	x
10. Suggest they go on a "health program" (exercise, nutrition, sleep, no-smoking, -- the works)	x	x	x
11. Figure out how many dollars the smoker has already spent on the habit. Calculate how much more he will spend if he contunues until he is 65.	x	x	x
12. If they are trying to quit give praise and encouragement.	x	x	x
13. If they try and fail don't ridicule but say something like "Gee, I know how disappointed you must be. You really tried hard. It must be tough. Maybe if you try again you'll make it."	x	x	x
14. Reassure them of your affection whether or not they stop.	x	x	x
15. If a smoker's smoke bothers you, ask him politely to leave or put his cigarette out.	x	x	x
EXPERIENCES			
Discussion of why each of the above techniques might help the smoker stop. Why is it important to encourage and help smokers to stop?	x	x	x
Socio-drama of one or more of these techniques in question or student reports on the techniques.	x	x	
Home experiment using cooperating smoking family member as a subject and report to class.	x	x	

	GRADE LEVEL		
	Elem.	Jr.	Sr.
RESOURCES			
Learning to Live Without Cigarettes by Allen, Angermann, and Fackler.			x
Film: "Breaking The Habit", Ohio Department of Health, American Cancer Society.			x

2903.04 SALE OF TOBACCO TO MINORS (GC) (12965)

No person shall sell, give, or furnish to a person under eighteen years of age a cigarette, cigarette wrapper, or substitute for either, or a cigar or tobacco.

Whoever violates this section shall be fined not less than twenty-five nor more than one hundred dollars or imprisoned not less than two nor more than thirty days, or both for a first offense; for each subsequent offense such person shall be fined not less than fifty nor more than three hundred dollars and imprisoned not less than five nor more than sixty days.

(Copy of the law in regard to sale of tobacco to persons under eighteen years of age.)

RESOLUTION

WHEREAS cigarette smoking has been established as having a causal relationship with death and disability from lung cancer, coronary heart disease, emphysema and chronic bronchitis, and

WHEREAS death and disability from these diseases cause needless pain and anguish and millions of dollars in lost wages, medical expenses and hospitalization, and

WHEREAS the conclusion of the Smoking and Health Advisory Committee to the Surgeon General of the United States Public Health Service is that:

> "Cigarette smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action", and

WHEREAS the following national organizations agree with the conclusion of the Smoking and Health Advisory Committee

American Association for Health, Physical Education and Recreation

American Association of School Administrators

American Cancer Society

American College Health Association

American Dental Association

American Heart Association

American Pharmaceutical Association

American Public Health Association

American School Health Association

Association of State and Territorial Health Officers

Department of Classroom Teachers of The National Education Association

National Congress of Parents and Teachers

National League for Nursing

National Tuberculosis Association

U. S. Children's Bureau

U. S. Office of Education

U. S. Public Health Service

Affiliate Membership:

Boys' Clubs of America

National Board of Young Men's Christian Association

National Board of Young Women's Christian Association

National Student Nurses Association

Public Health Cancer Association of America

THEREFORE BE IT RESOLVED that members of the Ohio State Medical Association officially recognize their opportunities and responsibilities in this important field by ---modifying their personal habits as regards cigarette smoking

---participating actively in their practices and in community programs to influence and persuade both smokers and nonsmokers, not to smoke.

APPENDIX I

CHECKLIST OF KEY FACTS RELATED TO CIGARETTE SMOKING AND HEALTH

Cardiovascular System: Cigarette smoking . . .

1. doubles one's risk of heart attack.
2. increases heart attack risks with amount smoked.
3. increases heart rates 15-25 beats with one to two cigarettes.
4. constricts small arteries (arterioles) causing higher blood pressures.
5. increases chances of developing peripheral vascular disease such as Buerger's disease in which amputation of fingers and toes is frequently necessary.
6. causes carbon monoxide from smoke to rob blood.
7. causes increased free fatty acids in blood which may be related to heart attack.
8. may increase blood platelet weakness with consequent increase in clotting tendency, hence, heart attack.
9. smokers who quit reduce their chances of heart attack to levels comparable to that of persons who have never smoked.

Respiratory System: Cigarette smoking . . .

1. increases risk of developing lung cancer ten-fold.
2. increases lung cancer risks with amount smoked, with length of time smoked, and with early age of starting.
3. is the major factor identified in the development of lung cancer.
4. approximately one in twenty lung cancer victims are saved by medical treatment.
5. lung cancer deaths exceed traffic deaths per year.
6. is the most important cause of chronic bronchitis.
7. increases risk of dying of chronic bronchitis and emphysema about six-fold.
8. about 50% of inhaled smoke remains in lungs.
9. tends to paralize bronchial cilia, and stimulate over-production of mucus.
10. causes increase in abnormal cell growth in bronchial tube walls with increase in basal cell layers and thickening.
11. causes closing of bronchioles reducing effective breathing space and resulting in stretching and rupture of alveoli.
12. eventually destroys ciliary structure and function interfering with cilia-mucus cleansing system predisposing to respiratory infections generally.

Increased Mortality from Other Causes: Cigarette Smoking is associated with . . .

1. five-fold increase in cancer of larynx.
2. four-fold increase in mouth cancer.
3. three-fold increase in cancer of esophagus.
4. three-fold increase in ulcer deaths.
5. doubled risk of death from cirrohsis.
6. doubled risk of bladder cancer.
7. fifty percent increase in cancer of kidneys.
8. almost six-fold increase in lung cancer deaths among men and women, age 45-64.

Overall Morbidity and Mortality: Cigarette Smoking is associated with . . .

1. an estimated 300,000 premature deaths per year in U.S.A.
2. some 11,000,000 excess chronic conditions in a year.
3. 300,000 extra coronary attacks per year.
4. 2,000,000 extra cases of sinusitis.
5. 1,000,000 extra cases of chronic bronchitis and emphysema.
6. 1,000,000 extra cases of peptic ulcers.
7. increased morbidity and mortality with
   a. amount smoked
   b. number of years smoked
   c. younger persons begin smoking
   d. inhaling
8. the male smoker who at age 25, smokes 2 or more packs of cigarettes a day, has his life expectancy reduced by more than eight years.

Miscellaneous Disadvantages:

1. Dependence, habituation, and possibly addiction.
2. Dulling of smell, taste, appetite. May contribute to malnutrition.
3. Lowered athletic ability.
4. "Tobacco breath"
5. Stains on teeth and hands.
6. Eye irritation.
7. 130,000 fires every year related to cigarette smoking.
8. Smoke offensive to others.
9. Litter of ashes and butts.
10. Becoming a prey of manipulative influences.
11. Smokers cough.
12. Accelerated degenerative aging processes.
13. 77 million extra work days lost per year attributed to smoking, which represents almost 20% of the entire annual work loss in the U.S. which result from illness.
14. 300 million extra days per year of restricted activity related to cigarette smoking.
15. Women who smoke cigarettes, including both housewives and those who work outside the home, spend 17 percent more days ill in bed than women who have never smoked.

Rewards of Smoking:

1. Improvement of self-image.
2. Gratification of oral needs.
3. Relaxation and ease of tension.
4. Enhance "good feelings and good times."
5. Reduce anxiety of "bad" feelings.
6. Feeling of "bond" between smokers -- belonging.
7. Identification with "models" who smoke.
8. Pleasure of smell, taste, inhalation.
9. Ease in social situations (something to do).
10. Visual and tactile stimuli.
11. Gratifciation of indulging the habit.

Beginning to Smoke: Related factors

1. Parents smoke.
2. Friends smoke.
3. Less academically inclined.
4. Fewer school related extra-curricular activities (especially athletics).
5. Tend to be more viscerotonic and less cerebrotonic in personality types.
6. Tend to have less "ability", lower goals and lower achievement.
7. Direct forces encouraging smoking include: curiosity, emulation of significant others, peer conformity, identity needs, immediate gratification, rebellion.

Incidence of Smoking Behavior:

1. A sizable minority of about 52,000,000 Americans are cigarette smokers.
2. The "average" smoker smokes about 20 cigarettes per day.
3. About 20 million American adults have quit smoking since 1964.
4. Percentage of smoking physicians has been cut in half in recent years.
5. Most adult smokers indicates that they would "like" to stop.
6. Every day some 4,000 young people become cigarette smokers.
7. By high school graduation some 40-50% of young people are smokers.
8. Incidence of smoking increases at a steady rate through sophomore college year and then begins to level off.

Economics of Cigarette Smoking:

1. More than eight billion dollars, annual U.S. sales for cigarettes.
2. About 312 million dollars "invested" each year in cigarette advertising (mostly on television).
3. More than 4 billion dollars collected yearly by Federal, State and local tobacco taxes.
4. About three million dollars invested each year in smoking education.
5. Pack-a-day smoker about 150 dollars per year for cigarettes.
6. Social Security Administration distributes more than 60 million dollars per year in disability payments to men disabled by emphysema.
7. Total costs of excess morbidity and mortality from cigarette smoking enormous but virtually impossible to calculate.
8. Several life insurance companies offer policies to non-smokers at reduced rates.

Position of the Tobacco Industry:

1. Consistant rejection of evidence of health threat of smoking though with little corroborating data.
2. Reacts to health threat evidence and publicity with increased promotional efforts.
3. Accepted minimal "self-imposed" restrictions on advertising which might appeal to children.
4. Cooperated with federal requirement to place health warning on cigarette packages.
5. Retreats behind "sanctity" of "free trade" traditions when further restraints are suggested.
6. Researching the possibility of a "safe" cigarette.
7. Continues to command powerful economics and political influence at all levels.
8. Evidence little obligation beyond the economic health of the industry.

"Safe Cigarettes" The Problem:

1. No criteria of safety available.
2. Taste and effects of cigarettes in the harmful nicotine, tars, and gases.
3. Filters vary greatly in efficiency.
4. Stronger tobacco used in some filter brands.
5. Cigarettes lowest in nicotine and tars among least popular brands.
6. Many and complex harmful chemicals in smoke make filters which are both selectively effective and "tasty" virtually impossible to develop.
7. Cigarette industry apparently prefers to "push" pleasure and taste rather than safety.
8. Some psychological and social needs may be satisfied with a "safe warm air" cigarette if it could be developed.

Benefits of Quitting Smoking:

1. Consistent decline in death rates of men smokers related to time elapsed since qutiting.
2. Death rates for ex-smokers who have not smoked for 10 years or more are close to those of non-smokers.
3. Your food will taste better.
4. If you have "smoker's cough" it will probably clear-up soon after you quit.
5. You'll have more money to spend on things that you really want.

Who Smokes Cigarettes?

1. Approximately 37.7% of the total population 17 years old and over were cigarette smokers as of August, 1968.
2. Less than half of the adult population are cigarette smokers.
3. For a man, the greater his income and the more education he has, the less likely he is to be a cigarette smoker.
4. The highest proportion of smokers among both men and women is in the age group 25-44.
5. Fewer people who live on farms smoke than those who live in metropolitan areas.
6. A high proportion of women than men are cigarette smokers.

Smoking Research/San Diego is a health education project of the San Diego County Council on Smoking and Health, supported by U.S. Public Health Service Funds under contract #PH 108-66-46.

Revised – June, 1970

APPENDIX II

SMOKING AND HEALTH VOCABULARY

ADDICTION: Very strong dependence on a substance taken into the body, or a practice without which one is incompacitated.

AESTHETIC: Pertaining to qualities of beauty (aspects of smoking which contribute to, or detract from beauty).

AIR POLLUTION: Any contamination of the atmosphere which lowers the quality of natural air.

ALVEOLI: Tiny air sacs at the end of each bronchiole in the lungs.

ARTERIES: Large elastic blood vessels which carry blood from the heart to the arterioles.

ARTERIOLES: Circulatory structure which carry blood from arteries to the capillaries.

BRONCHI: Two principal branches of the windpipe, or trachea.

BRONCHITIS: Irritation or inflamation of the lining of the bronchial tubes.

BUERGER'S DISEASE: A disorder in which blood vessels of arms and legs are irritated and inflamed, causing poor circulation. Smoking appears to cause inflamation of the vessels.

CANCER: Any malignant tumor.

CAPILLARY: Smallest of the blood vessels.

CARBON DIOXIDE: A gasseous by-product of life processes exhaled from the lungs.

CARCINOGEN: A substance or agent causing development of cancer.

CARBON MONOXIDE: A by-product produced by burning material which is picked up by blood instead of oxygen.

CARDIOVASCULAR: Pertaining to the heart and blood vessels.

CELLS: A unit of structure of living matter.

CHRONIC: Continuing for a long time.

CILIA: Tiny hair-like processes found in various parts of the body that help propel fluids.

CIRCULATORY: Pertaining to circulation, movement of blood through the vessels of the body.

CIRRHOSIS: A degenerative disease of the liver related to the use of alcohol and tobacco.

CONSTRICT: To limit or to close down. As to constrict arterioles from smoking.

CVR: Abbreviation for cardiovascular respiratory system or the coordinate function of heart, circulation, and lungs.

DIAPHRAGM: Muscular partition located at the bottom of the chest cavity used in breathing.

EMPHYSEMA: Greek word meaning "inflation"; swelling or inflation of tissue due to presence of gas; over-inflation of the alveoli.

EXHALE: To breathe out.

FILTER: A porous material used to remove impurities. Used in cigarettes to help remove tars and nicotine.

HABITUATION: A state of dependence resulting from a long continued practice or habit.

INHALE: To breathe in.

LUNGS: The two organs of breathing in which normally the blood gives up carbon dioxide and receives oxygen.

MALIGNANT: Deadly or tending to produce death.

MORBIDITY: Relative frequency of illness or illness rate usually of specific diseases or disorders.

MORTALITY: Relative frequency of death or death rate as from one or another specific cause.

MOTIVATIONAL RESEARCH: Psychological investigation to determine what causes people to behave in certain ways. Used in advertising to determine how people may most effectively be influenced.

MUCUS: A sticky liquid secreted by mucus glands.

NICOTINE: A poison found in the leaves of tobacco plant and responsible for some of the harmful effects of tobacco.

ORGANISM: Any complete living thing.

OXYGEN: A colorless, odorless gaseous element constituting about one-fifth of the total volume of the atmosphere.

PROPAGANDA: A one-sided presentation of information often with use of lies, half-truths or telling only that part of the truth which supports one's position.

RESPIRATORY: Of or pertaining to breathing.

SMOG: A mixture of smoke and fog in the air.

SPUTUM: Irritating or excess waste materials of the respiratory system removed usually by coughing and spitting.

STATISTICS: Numerical facts, systematically collected and classified regarding a large group of persons or things.

SURVEYS: A general or comprehensive view or examination of the chief features of anything.

TARS: Thick brownish-black substance, source of many chemical substances, consists of a mixture of hydrocarbons and their derivatives; obtained by destructive distillation of carbonaceous matter.

TOBACCO AMBLYOPIA: Dimness or blurring of vision associated with smoking in sensitive individuals.

TRACHEA: (windpipe) tube from larynx to lungs.

TUMOR: Any abnormal growth of cells in the body forming a "lump" or mass.

APPENDIX III

SUGGESTIONS FOR SMOKING EDUCATION

GRADES ONE, TWO, THREE, FOUR

Boys and girls are beginning to smoke at younger and younger ages but it is still unusual for them to begin before eleven. While overt smoking may not have begun, however, continued exposure of children to pro-smoking stimuli creates in many a strong predisposition to smoke "when the time comes." It is, therefore, imperative that teachers in the elementary classroom sieze every opportunity to underline the importance of *not smoking*. School may be the only important force in a childs life that questions the acceptability of smoking.

Following are some specific suggestions. It is assumed that teachers will find many additional ways to discourage smoking.

Materials have been arranged so that sheets may be duplicated, cut in half and placed directly in the teachers health text.

Supplement on Air and Smoking for Health I, following "How You Grow," page 67.

You need some other things to grow and stay well.

They are not shown in the book, can anyone think of what those other things might be?

I'll give you some clues. One is all around you all the time. Airplanes and birds couldn't fly without it.

AIR!

What do you do with air? You breathe it. Air helps you use the food you eat for energy.

How are you breathing now? It's automatic isn't it?

But what can you do with your breath if you think about it

Inhale deeply
Hold your breath
Blow a piece of paper
Exhale through your nose
Exhale through your mouth?

Would you rather breathe clean or dirty air?

Clean air!

What are some of the things that dirty your air?

Smoke from fires and chimneys
Dust blown up by the wind
Exhausts from cars and trucks
Tobacco smoke

What can you do to help keep your air clean?

Hold your breath for a short time if dirty air blows your way?
Can't do much about dirty air from cars and chimneys.

Move out of the room of people who are smoking cigarettes or cigars or pipes.
Ask politely that people who are smoking not smoke if it bothers you.
Let's play a game. Let's pretend that I just lit a cigarette and you want to ask me politely not to smoke. Call on several pupils individually for their responses. Help them develop more adequate responses.

As you grow up you will want to help keep your own air and the air of everyone else as clean as possible. How might you do this? Never start smoking. You wouldn't stick your head in a chimney and breathe the smoke would you? So why breathe the dirty air from cigarettes? I hope none of you ever smokes.

When is the air the cleanest? Right after a rain! Next time it rains we'll talk about how clean and fresh the air feels and why . . . the water falling through the air washes the air.

Water . . . clear water

Don't drink water you're not sure of.

How can you tell? Etc.

If children express concern about smoking parents reassure them that not everyone who smokes is seriously injured.

GRADE TWO

Supplement of Fire Safety and Smoking for Health 2, following "Stay Safe from Fire," page 28.

Let's play a game.

I'm thinking of a main cause of fires in homes and in fields and forests. What am I thinking of?

Matches are used in what I'm thinking about but I'm thinking about something other than matches.

Matches are used to light what I'm thinking about.

It's something wrapped in white paper.

Cigarettes!

Yes, careless use of cigarettes by adults who smoke often cause fires.

What do you suppose could be done about this?

It would be better if no one smoked not only because cigarette smoke makes air dirty and is not good for your health, but because they often cause fires.

Ask people who smoke to be careful with the fire they are using.

Remind them not to throw cigarettes or matches out of car windows.

Let's pretend that we're walking through a dry forest and pull out a cigarette to light (make a cigarette lighting gesture). What might you say to me? (Help pupils build appropriate responses) At the end of this exercise indicate your distaste for the imaginary cigarette with something like,"Blah, that's a horrible taste anyway" or "I can't understand why anyone would want to breathe burning leaves rolled in paper anyway."

GRADE TWO

Supplement of Air and Smoking for Health 2, following "What Helps You Grow," page 92.

You need some other things to grow and stay well.

They are shown in the book, can anyone think of what those other things might be?

I'll give you some clues. One is all around you all the time. Airplanes and birds couldn't fly without it.

AIR!

What do you do with air? You breathe it. Air helps you use the food you eat for energy.

How are you breathing now? It's automatic isn't it?

But what can you do with your breath if you think about it

Inhale deeply
Hold your breath
Blow a piece of paper
Exhale through your nose
Exhale through your mouth?

Would you rather breathe clean or dirty air?

Clean air!

What are some of the things that dirty your air?

Smoke from fires and chimneys
Dust blown up by the wind
Exhausts from cars and trucks
Tobacco smoke

What can you do to help keep your air clean?

Hold your breath for a short time if dirty air blows your way?

Can't do much about dirty air from cars and chimneys.

GRADE TWO

Move out of the room of people who are smoking cigarettes or cigars or pipes.
Ask politely that people who are smoking not smoke if it bothers you.

Let's play a game. Let's pretend that I just lit a cigarette and you want to ask me not to smoke. Think of how you might ask me politely not to smoke. Call on several pupils individually for their responses. Help them develop more adequate responses.

As you grow up you will want to help keep your own air and the air of everyone else as clean as possible. How might you do this? Never start smoking. You wouldn't stick your head in a chimney and breathe the smoke would you? So why breathe the dirty air from cigarettes? I hope none of you ever smokes.

When is the air the cleanest? Right after a rain! Next time it rains we'll talk about how clean and fresh the air feels and why . . . the water falling through the air washes the air.

Water . . . clean water.

Don't drink water you're not sure of.

How can you tell? Etc.

Exercise on things that are appropriate to put in your mouth and things that are bad to put in your mouth. Teacher names the item and children respond appropriate -- inappropriate:

Your toothbrush	An unwashed apple
Someone else's toothbrush	A washed apple
Vegetables cooked for you at home	A pencil
A cracker you find on the sidewalk	A cigarette
A clean water glass	A pill you find
A whistle that belongs to you	A toy car
A door knob	Ice cream

Supplement on Exercise Training, Smoking for Health 3, following "Exercise and Rest" page 74

Do you think it is fun to run and jump and play active games? Of course you do. And active games are not only for children. You will be able to enjoy strenuous exercise for many years to come.

How many of you will like to be able to exercise and play as hard when you are grown as you do now?

All of you do but whether you will be able to or not will depend on a number of things. Can you think of some of them?

The more you exert yourself the more you are able to exert yourself. Athletes call this training and all champions train. But whether or not you're a champion you can benefit from training. Training requires following certain important rules. What do you suppose these rules are:

1. Regular hard exercise (everyday)
2. Sleep
3. Proper food

But there is something else. What happens when you play hard--you breathe hard and fast. Why do you suppose this is?--Because your body needs oxygen and in order for you to get the oxygen you need you need clean healthy lungs. Now everyone should have clean lungs but some people don't. What do you suppose they do to make their lungs not so clean and not so able to use oxygen-- cigarette smoking. So to enjoy active sports and exercise all your life you will certainly never breathe dirty air if you can help it. People who understand this usually decide that they will never smoke cigarettes.

GRADE THREE

Supplement on Fire Safety and Smoking for Health 3, following "Campfires", page 31.

Failure to put out campfires is not the only thing that causes forest fires and brush fires. can anyone think of other causes?

Careless use of matches.
Lightning
Careless use of cigarettes

Cigarettes cause a great deal of damage. Not only are a lot of homes and forest fires started from cigarettes but smoking damages the breathing of smokers and causes many dangerous diseases. Wouldn't it be better if no one smoked and the air could always be fresh and clean?

How many of you will remind smokers to be careful of the fire they are using?

How many of you will remind smokers that smoking is bad for their health?

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GRADE THREE

Supplement on Taste, Smell, and Smoking for Health 3, following "Your Nose and Tongue," page 43.

Isn't it wonderful to be able to smell and taste all the good things in the world? You would never want to do anything that would interfere with your enjoyment of taste and smell would you?

A lot of grown ups do something which interferes with their smelling and tasting. It's something that they put in their mouths and it affects their tasting, sense of smell, and their health? --- Would you believe burning leaves? Cigarettes of course! And they do dull one's sense of smell and taste. You will be very wise and get more out of life if you never smoke.

GRADE FOUR

Supplementary idea for instruction related to smoking for Health 4. To be used in conjunction with Chapter 12, "Growing Up."

Organize a simple socio-drama in which a group of pupils (selected for their likely resistance to smoking) play the role of a gang who are experimenting with cigarettes and who are trying to get certain individuals, in turn, to join them. Have pupils think of how they would refuse gracefully to join in this behavior. Then select several to play it out with the "gang." Then discuss with pupils how hard it is not to go with the gang, but why being yourself and "sticking to your guns" is important. You might also discuss why the gang finds smoking so appealing and how these reasons are signs of immaturity rather than maturity.

Another approach which is very effective at this level deals with the many ways others often try to get us to do things we don't really want to do. This leads to a consideration of advertising and propaganda.

Students are led to bring cigarette ads cut from magazines and analyze them as to what techniques and forms of deception are used: Association with fun, youth, success, glamour, beauty, romance, relaxation, contentment, "hemanish," cuteness, and cleverness; slogans, repetition, catch phrases, implied safety (filters) sociability. Status (colors and symbols on packs as well as people in ads). Something for nothing (longer length; premiums) band wagon, etc.

Discuss how understanding techniques used can help us be more ourselves and less manipulated by others who don't care about us or our health but just want our money.

GRADE FOUR

Learning can be further facilitated if they are given an opportunity to use the same techniques in constructing anti-cigarette ads. This teaches, is fun to do, and learnings are reinforced if the "anti-smoking ads" are displayed on the bulletin board.

Question for discussion: Is it good manners for for an adult to smoke in a room of other people without asking their permission? It is not. Is it good manners to ask someone who is about to light a cigarette not to if smoke bothers you. It is, if you do it politely.

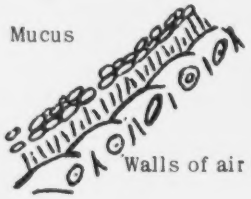
Set up a socio-drama situation and play it out.

Pupils may be encouraged to discuss their desire never to smoke with their parents. Every expression of their commitments strengthens them and makes one less available to manipulative influence.

GRADE FOUR

Supplementary ideas for instruction related to smoking for Health 4: To be used in conjunction with Chapter 4 "Your Nose and Throat." page 63

Here's an illustration which may give you a better idea of just how cilia help keep your air passages clean and clear.



Cilia in the trachea and bronchial tubes sweep the mucus upward toward the mouth. (Illustrate by moving a finger from your own chest up the throat).

And as the mucus "escalator" moves slowly toward the mouth it carries with it the dust and the dirt that has stuck to it.

What do you think happens to the mucus when it reaches the back of your mouth?

You normally swallow it or sometimes you might spit it out.

Now the cilia above the mouth and in the nose (point with a finger move the mucus down toward the mouth. And again what happens to it?

Swallow it or spit it out.

So mucus is moved by cilia to keep your air passages clean all the time whether you are asleep or awake regardless of what you are doing.

You might ask, "if you are constantly getting rid of mucus in this way, might not you run out of mucus?"

What do you think?

Yes, the mucus is constantly being replaced by your body so you never run out.

But what would happen if the cilia slowed down or stopped and the mucus kept being replaced?

Right! It would build up and clog your air ways and it would get harder and harder for you to breathe unless you got rid of it in some way.

Can anyone think of how you might get rid of excess mucus if the cilia didn't work properly?

You would cough. When you cough a powerful blast or air is forced through the air passages pushing some of the excess mucus out. Coughing works fairly well but too much coughing eventually might injure the lungs so the cilia escalator is still the best cleaning system.

So you would never want your cilia to stop operating would you.

Now, one thing that some adults do slows down and stops the cilia. It's something that irritates the air passages too. Do you know what it might be?

I'll give you a clue: it involves ground leaves and fire.

Of course smoking. When a smoker inhales cigarette smoke his cilia tend to become paralized.

You may know a smoker who coughs a lot in the morning when he wakes up. He's trying to clear his air passages of excess mucus so he can breathe easier.

When you understand this how do you feel about smoking?

Exactly, it would be much better for your lungs and for you if you never smoke. Besides this smoking causes a lot of other kinds of illnesses. Have any of you ever heard of any of these smoking related illnesses by name? (if they name some, fine but if not mention cancer and heart attacks.)

But that's another story.

Related to "Sense of Smell" page 62

Another cause for losing some of your sense of taste or smell is smoking. People who smoke cigarettes can't enjoy tastes or smells as well as people who don't smoke. And when tobacco smoke fills the air you can hardly smell anything else can you? This is true whether you smoke or not isn't it?

Supplement to "Care of Nose and Throat" page 63, 64

Never be a cigarette smoker because smokers have more and more severe colds than persons who don't smoke.

NOTE: If a pupil observes that smoking is not a problem for him because he's too young to smoke answer with something like, "Of course you are and if you decide now not to smoke, when you *are* old enough you are much less likely to smoke. And you will be healthier and happier if you don't.

Supplementary Idea related to smoking for Health 4, page 142.

Arrange pupils in teams and have each team list as many reasons as they can think of for not smoking. The team with the most reasons wins, but "everyone who doesn't become a smoker wins in the long run."

Teacher might cue responses which involve: damaged lungs, smell and taste, lung cancer, coughing, lower athletic endurance, expensive, dirty, fire hazard, bad breath, etc.

APPENDIX IV

EXPERIMENT NO. 1. Tar Stain

Purpose: To demonstrate how much of the inhaled tars in cigarette smoke stay in the lungs.

Equipment, Materials, Personnel

1 lighted cigarette
1 clean handkerchief
1 cooperating smoker

Procedure: Have the smoker take in a big puff of smoke (without inhaling) and immediately blow it out slowly through pursed lips into a clean handkerchief stretched across the lips. Then have the smoker take the same size puff this time inhaling deeply into the lungs and again blow it through a clean spot on the handkerchief. Compare stains. Why is the second stain lighter? Where are the tars from the second puff? What are these tars doing to these air passages in the lungs?

EXPERIMENT NO. 2 Heart Rate

Purpose: To demonstrate the effect of smoking on the heart rate.

Equipment, Materials, Personnel

1 watch with sweep second hand
1 cigarette
1 cooperating smoker who has not exercised or had a cigarette for two hours

Procedure: Before smoking, count the subject's pulse or heart beats for one minute (record number). Have the smoker light up and take four deep puffs one after another. Count the heart beats for another minute (record number). Continue counting heart beats in a minute every five minutes and record each count. How long does it take for the heart beat to return to its pre-cigarette resting rate? Chart the data collected on a graph. What does this mean in terms of heart functioning and of wear and tear from continual overwork from smoking ?

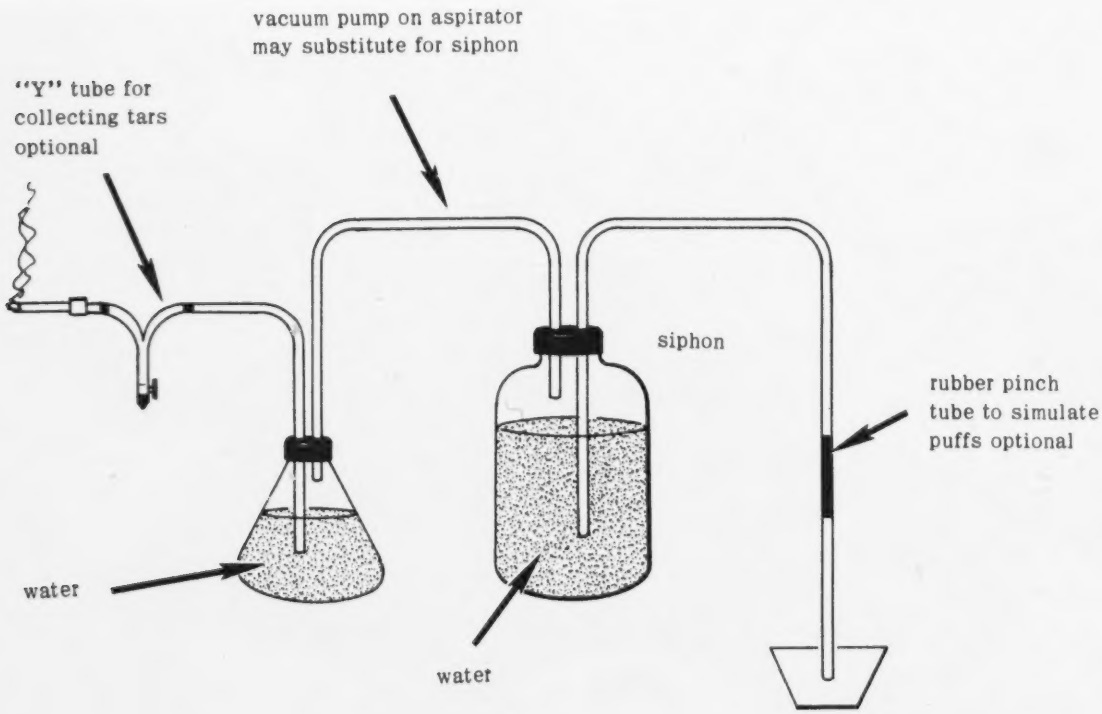
EXPERIMENT NO. 3 Tobacco Chemicals

Purpose: Demonstrate taste, odor, color of tobacco smoke chemicals collected in water.

Equipment and Materials

Small jar or flask with two-hole stopper
Large (gallon +) jar with two-hole stopper (or vacuum pump)
Delivery tubes
Cigarette holder
Several cigarettes
Large pan or jar to collect siphoned water

Procedure: Rig equipment as diagramed below, begin siphon and light cigarette. Smoke bubbles through water in small jar (add water for large jar and fresh cigarettes as needed). Smoking action may be simulated by starting and stopping siphon intermittently. Examine collected "smoke water." What color? Taste a drop. Use table of chemicals in cigarette smoke in discussing the contents of cigarette smoke.



EXPERIMENT NO. 4 Toxicity of Tobacco Smoke

Equipment and Materials

Same as in Experiment 3, plus two small gold fish or guppies and container of clean water.

Procedure: Set up as in Experiment 3, but place fish in small jar. Observe fish after only one or two "puffs." Remove fish to clean water immediately to save them.

Discuss anti-life toxicity of chemicals in tobacco smoke. Despite greater capacity and adaptability of human systems, tobacco smoke is similarly poisonous and long continued use places the human organism in jeopardy.

EXPERIMENT NO. 5 Conformity to group judgment

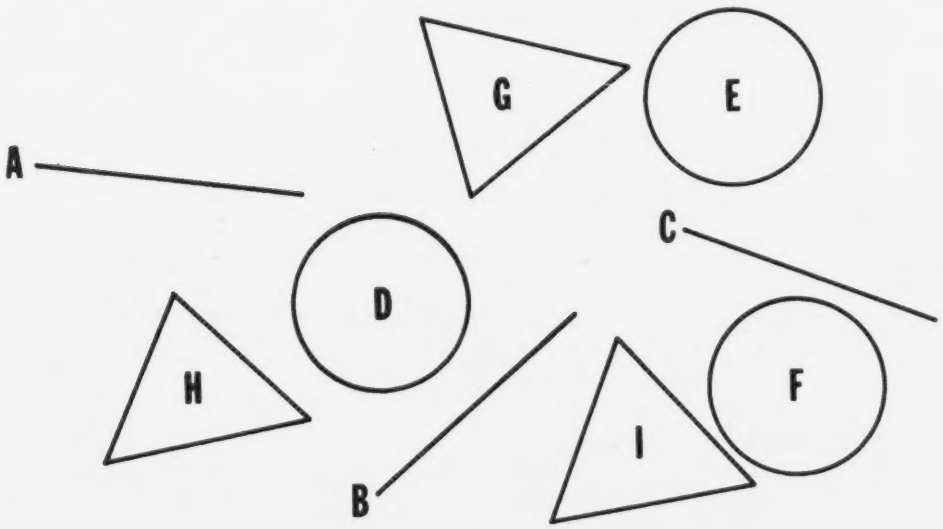
Purpose: To demonstrate the tendency to subordinate individual judgment to that of the group.

Equipment, Materials, Personnel

Blackboard and chalk
Four "instructed" subjects

Procedure: While Students are out of the room, draw three lines of identical length, three circles of identical diameter, and three identical triangles on the board, and lable them as indicated below. Privately instruct "cooperating" subjects chosen for their leadership to choose in an obvious fashion, A, F, and H in the exercise.

The class is asked which line is longer, which circle is smaller, and which triangle has the shortest side.



The "prepared" students are called on immediately in the order: first, second, _____, fourth, fifth. And a half dozen more students are called on third, sixth, seventh, etc.

The overwhelming tendency is for subsequent selections to conform to previous judgments.

How will you feel about smoking if those around you express that smoking is appropriate? How can one be free from this pressure to conform to "smoking norms" within one's group? Does one choose freely to smoke or is the "choice" dictated by one's environment?

APPENDIX V

English and Journalism Classes

Opportunities for correlating smoking education with English are virtually limitless. Here are some ideas:

1. Prepare debate, essays, speeches, plays, slogans, etc.
2. Reading and critiques of current magazine articles, books, pamphlets, dealing with smoking.
3. Smoking materials used in grammar instruction exercises.
4. Language and propaganda exercises.
5. Journalism exercises in editorial writing, interviews, feature writing, news stories, etc.

I. GRAMMAR

Suggestions of examples which may be used to demonstrate various points in grammar.

A. WRITE THE VERB AND SUBJECT OF EACH OF THE FOLLOWING SENTENCES.

1. A rasping cigarette cough startled me.
2. The non-smokers moved quickly.
3. To my ears came a muffled cough.
4. The two coughs indicated more than one visitor.
5. With a cough the smokers revealed themselves.
6. A non-smoker almost always has an advantage.
7. A few extra breaths may make a lot of difference in a basketball game.
8. Long wind is of special advantage in a basketball game.
9. The player with long wind has an advantage in tennis too.
10. Most famous athletes have been non-smokers.

B. IN THE FOLLOWING SENTENCES TELL WHAT THE SUBJECT IS AND WHAT THE PREDICATE IS.

1. Frances smoked three cigarettes during the break.
2. All around us rose the smoke from cigarettes.
3. Many of your best friends will be smoking before graduation.
4. The new cigarettes are longer and more dangerous.

5. Freddie threw down his cigarette and began to work.

6. Jerry received a cigarette lighter and cigarette case as a birthday gift.

7. The King of France treated cigarette smoking with indifference.

8. For males smoking cigarettes only, the over-all death rate is higher than that for non-smokers.

9. Since the turn of the century, scientists have become interested in the effects of tobacco on health.

10. Few medical questions have stirred such public interest than the tobacco-health controversy.

II. COMPOSITION

A. RESEARCH REPORT TOPICS. (Papers or speeches)

1. Compare smoking and non-smoking heroes in 20th Century Literature. What, if any, trends seem to be apparent?

2. Read authentic literature dealing with the ingredients of tobacco, the by-products of combustion and the effects on human organism. Report significant findings.

3. Tricks of the "Propaganda Trade" -- Can you detect them?

4. Legislation related to the sale of alcohol and tobacco to minors. Federal and state laws.

5. "The Smoking Detective" -- Can the modern detective novel succeed without its hero smoking? Compare Agatha Christie, E.S. Gardner, Ellery Queen, Richard S. Prather, Leslie Charteris, etc.

6. "The Smoking Teenager" -- What trends, if any, are apparent with regard to teenagers smoking in modern literature?

7. "Smoking in the Space Age" -- What are the possibilities for smoking in the future, as is evidenced in science fiction? (c.f. Isaac Asinov, C.M. Kornbluth, Arthur C. Clarke, Robert Heinlein, C.S. Lewis, Fred Pohl, Anderson Hoyle, ET. al.)

8. "Smoking and Health" -- How do statistics effect teenagers? What does the smoking habit mean to the teenager today? How do medical reports on the hazards of smoking effect teenagers decisions?

9. "Economic and Social Effects of Excessive Smoking" -- What are they? How do these factors effect Teenagers?

10. "Relationship of Smoking to Physical Fitness" -- How severe are the effects when you begin the smoking habit? 5 years later? 10 years later? 20 years later?

B. ESSAY TOPICS.

1. Prove that the beneficial aspects of Smoking outwiegh its hazards.

2. What are the Moral Issues Involved with Cigarette Advertising?

3. How Can the Smoking-Sophistication Image be Shattered?

4. What Are the Psychological And Social Factors Which Motivate People to Smoke and Drink?

B. ESSAY TOPICS.

5. Describe and Analyze the Factors Which Attract Students to Smoking.

6. Relate Personal Experiences with Regard to the Manner in Which Students Are First Introduced to Smoking.

7. Describe the Habit-Forming Power of Nicotine.

8. Discuss How Your Health Habits and Attitudes are Developed.

   How Do Attitudes Effect Actions?
   How Can You Detect and Eliminate Blind Spots or Prejudices in Your Judgment on Health Issues?
   Cite one Example or Personal Experience with a Health Problem.

9. Compare the Beneficial and Damaging Effects of Smoking.

10. Consider and Present the Arguments Against the Following Appeals for Smoking:

    "Misery Loves Company."
    "Everybody Does It."
    "Be a Regular Guy."
    "It Won't Hurt You."
    "Be One of the Boys."
    "It's the Taste That Counts."
    "I'm a Big Success (with the boys/girls.) I smoke."

11. What is the Relationship of Smoking to Physical Fitness?

12. Discuss other ways You Would Use Money Than For the Purchase of Cigarettes.

13. Report on a Variety of Wholesome, Happy, Physical and Social Activities in Which Teenagers May Engage.

14. What is Your Responsibility as a Teenager for Refraining From Using Any Substance Which May Be Detrimental to Fitness and Well-being?

15. Analyze Your Emotional Response to Cigarette Advertising, Smoking/Non-Smoking Practices of Your Friends, Advice of Your Parents, and Current Medical Reports Related to the Effects of Tobacco on the Human Organism.

16. Describe: "How a Cigarette Tastes"
    "How Boys Hold or Light a Cigarette As Compared To Girls"
    "Your Reaction To Boys/Girls Who Smoke/Do Not Smoke"

III: PROPAGANDA UNIT -- ADVERTISING

A. OBJECTIVES

1. To allow students to discover the techniques that are used in various forms of advertising.

2. To allow students to find ways of generalizing these techniques so that they may be used in their writing.

3. To alert students to the ways in which they may be manipulated by cigarette advertising.

B. METHODS

1. Begin the unit by discussing propaganda in general and the whole process of manipulation and persuasion.

2. Have students bring in examples of cigarette advertising from magazines, newspapers, etc. Have them study the examples closely, and allow them to inductively arrive at the various forms of propaganda being used: "The Big Lie," "Bandwagon," etc.

3 Project: Marketing a Cigarette

The students will be split into several groups for the purpose of having them try to actually market a cigarette. The purpose of this will be to actually have them work first hand with the same techniques that are being used against them in advertising. With directed supervision, this should make them much more aware and hopefully wary of advertising.

Each group will be designated a new tobacco company. They each have a new cigarette they must put up on the market. Each group must find a name for their cigarette. Each group must think up advertising slogans. It might even be possible for them to develop a few advertising layouts for magazines. It might also be possible for them to develop a short script or skit for a television commercial. Evaluation should be done in terms of cleverness, originality, and appropriate use of advertising techniques.

4. Culminating Exercise: Persuasive Essay

The student should now have an opportunity to learn how to generalize from the techniques already learned, and try to apply them to their individual writing in the form of a persuasive essay. They should learn the necessity of bold writing, the rhetorical question, etc., for this type of exposition. They should be graded on the effectiveness of their arguments as evidenced by their use of propaganda techniques.

III. PROPAGANDA UNIT -- ADVERTISING

C. SAMPLE TOPIC

1. "Citizens Should Be Required To Smoke To Help The Economy"

(I have found that better essays and student agitation occur when the students are forced to defend the so-called "wrong" point of view. At least, more original thinking occurs than if they were to write "Why We Should Not Smoke Cigarettes")

IV. POETICS

When studying poetics and prosody, have the students try their hand at writing limericks. A possible topic would be to write about the comical aspects of smoking. With limericks, students have a natural knack for satire, and these should turn out to be very funny.

V. JOURNALISM

A. EDITORIAL WRITING

1. Write editorials for or against smoking.

2. What is a newspaper's responsibility toward the health hazard that smoking represents?

3. How effective is a newspaper in influencing the social habits of a nation?

B. INTERVIEWS

1. Interview a local member of the American Medical Association on his views of the potential risk involved in starting the smoking habit. Write an article quoting his significant responses.

2. To practice interviewing techniques, have students interview doctors, nurses, respiratory patients, cigarette smokers, advertising firms, etc., for the possibility of an issue devoted to smoking.

C. FEATURE WRITING

1. Write a "Health Tip" on Smoking for the school paper.

2. Conduct a poll of the students to determine the percentage of smokers to non-smokers.

3. Write a feature article analyzing the results of the poll and it's implications.

4. Read and evaluate current popular magazine articles, books and pamphlets on the topic of smoking. Prepare an article for the next issue of the paper.

D. NEWS STORIES

1. Report on the address or assembly program sponsored by the Education Committee of the local branch of the American Cancer Society.

2. Report on the adverse reactions resulting from the new "Training Rules" set for the football team. Discuss the rationale of the coach and the reactions of the team members.

VI. BOOK REPORTS OR CRITIQUES

For an example of a non-fiction book, have the students select books written about cigarette smoking, the tobacco industry, modern advertising, etc., and then have them critique their readings.

VII. SPEECH

A. DEBATE TOPIC
1. Resolved: Cigarette Smoking is Essential for the Economical Health of Our Nation.

B. PERSUASIVE SPEECHES

Various speeches could be assigned to persuade students *for* or *against* smoking.

C. INFORMAL PANEL DISCUSSION

Informal panel and class discussions about teenage smoking can provide an opportunity for group decision-making to strengthen individual resolves.

VIII. LANGUAGE ARTS

Students may be given opportunities to write plays, scripts, slogans and verses on the use and non-use of tobacco.

IX. LIBRARY SCIENCE

A. Students might work with the librarian to compile and display current newspaper, magazine articles, books, etc., on tobacco, its use, and its relationship to health.

B. Correlate library materials with units or topics regularly presented in science and health classes.

APPENDIX V

ART CLASSES

1. Anti-smoking poster, sculptures, cartoons, etc.

2. Poster contests. Display entries throughout school.

3. Layouts for anti-smoking "ads."

4. Preparation of smoking and health illustrations, graphs, charts for other classes.

BUSINESS AND VOCATIONAL CLASSES

1. Compile, type, and duplicate surveys on smoking; distribute them to student body or to specific classes for further use.

2. Study and discuss smoking as it relates to vocational opportunities, accidents, absenteeism, increased insurance costs, productivity.

3. Use smoking and health materials for various practice exercises in shorthand, typing, duplicating, etc.

SPECIFIC POSSIBILITIES:

1. Shorthand I (exercise)

> Women smokers have long seemed exempt from the deadly statistical evidence showing that cigarettes are a hazard to health. This apparent immunity in the face of the strong link between smoking and cancer and heart disease in men has led some researchers to suggest that a woman's hormones may protect her from the harmful effects of tobacco. The alleged protection, however, turns out to be a function of meager statistics rather than chemistry: with the first large-scale survey of women smokers now completed, the American Cancer Society reported last week that women who smoke do run a much higher risk of lung cancer and other diseases than non-smoking women.
>
> (Newsweek, March 7, 1966 page 66)

2. Typing I (exercise)

	WPM
Cigarette smoking is causally related to lung cancer in	10
men; the magnitude of the effect of cigarette smoking far	20
outweighs all other factors. The data for women, though less	30
extensive, point in the same direction.	36
The risk of developing lung cancer increases with duration	46
of smoking and the number of cigarettes smoked per day, and	56
is diminished by discontinuing smoking. In comparison with	66
non-smokers, average male smokers of cigarettes have approxi-	76
mately a nine- to ten-fold risk of developing lung cancer and	86
heavy smokers at least a twenty-fold risk.	92
The risk of developing cancer of the lung for the combined	102
group of pipe smokers, cigar smokers, and pipe and cigar smokers	112
is greater than for non-smokers, but much less than for cigar-	122
ette smokers.	124
Cigarette smoking is much more important than occupational	134
exposures in the causation of lung cancer in the general	144
population.	146

Typing II

CONSUMPTION OF TOBACCO PRODUCTS PER PERSON AGED 15 YEARS AND OVER IN THE UNITED STATES FOR SELECTED YEARS, 1900–1962

Year	Pounds of tobacco	Number of cigarettes	Number of cigars	Pipe tobacco pounds	Chewing tobacco pounds	Pounds of snuff
1900	7.42	49	111	1.63	4.10	0.32
1910	8.59	138	113	2.58	3.99	.50
1920	8.66	611	117	1.96	3.06	.50
1930	8.88	1,365	72	1.86	1.90	.46
1940	8.91	1,826	56	2.05	1.00	.38
1950	11.59	3,322	50	.94	.78	.36
1960	10.97	3,888	57	.59	.51	.29
1961	11.15	3,986	56	.59	.51	.27
1962	10.85	3,858	55	.56	.56	.26

Source: Department of Agriculture, Economic Research Service

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3. Duplicating Machines-Stencil

LUNG CANCER

While part of the rising trend for lung cancer is attributable to improvements in diagnosis, the continuing experience of the State registers and the autopsy series of large general hospitals leave little doubt that a true increase in the lung cancer death rate has taken place. About 5,700 women and 33,200 men died of lung cancer in the United States in 1961; as recently as 1955, the corresponding totals were 4,100 women and 22,700 men. This extraordinary rise has not been recorded for cancer of any other site.

When any separate cohort (a group of persons born during the same ten-year period) is scrutinized over successive decades, its lung cancer mortality rates vary directly with the recency of the birth of the group. The more recent the cohort, the higher the risk of lung cancer throughout life. Within each cohort, lung cancer mortality apparently increases unabated to the end of the life span. The pattern would suggest that the mortality differences may be due to differences in exposure to one or more factors or to a progressive change in population composition among the several cohorts.

A considerable amount of experimental work in many species of animals has demonstrated that certain polycyclic aromatic hydrocarbons identified in cigarette smoke can produce cancer. Other substances in tobacco and smoke, though not carcinogenic themselves, promote cancer production or lower the threshold to a known carcinogen.

There is abundant evidence, however, that cancer of the skin can be induced in man by industrial exposure to soots, coal tar, pitch and mineral oils; all of these contain various polycyclic aromatic hydrocarbons known to be carcinogenic in many species of animals. Some of these compounds are also present in tobacco smoke. Although it is noted that the few attempts to produce bronchogenic carcinoma directly with tobacco extracts, smoke, or condensates applied to the lung or the tracheobronchial tree of experimental animals have not been successful, the administration of polycyclic aromatic hydrocarbons, certain metals, radioactive substances, and certain viruses have been shown to produce such cancers. The characteristics of the tumors

produced are similar to that observed in experimental animals, it is highly probable that the tissues of man are susceptible to the carcinogenic action of some of the same polycyclic aromatic hydrocarbons that produce cancer in experimental animals. Neither the available epidemiological nor the experimental data is adequate to fix a safe dose of chemical carcinogens for men.

The 29 retrospective studies of the association between tobacco smoking and lung cancer varied considerably in design and method. Despite these variations, every one of the retrospective studies showed an association between smoking and lung cancer. All showed that proportionately more heavy smokers are found among the lung cancer patient than in the control populations and proportionately fewer non-smokers among the cases than among the controls.

An important criterion for the appraisal of causal significance of an association is its coherence with known facts of the natural history and biology of the disease. Careful examination of the natural history of smoking and of lung cancer shows the relationship to be coherent in every aspect that could be investigated. The probability that genetic influences might underlie both the tendency toward lung cancer and the tendency to smoke were also examined. The great rise in lung cancer recorded in man, that has occurred in recent decades, points to the introduction of new determinants without which genetic influences would have had little or no potency. The genetic factors in man were evidently not strong enough to cause the development of lung cancer in large numbers of people under environmental conditions that existed half a century ago. The assumption that the genetic constitution of a man could have changed gradually, simultaneously, and identically in many countries during this century is most unlikely. Moreover, the risk of developing lung cancer diminished when smoking is discontinued, although the genetic constitution must be assumed to have remained the same.

It has been recognized that a causal relationship between cigarette smoking and lung cancer does not exclude other factors. Approximately ten percent of lung cancer cases occur among non-smokers. The available evidence on occupational hazards, urbanization or industrialization and air pollution, and previous illness was considered for possible etiologic factors.

A significant excess of lung cancer deaths was found among workers in certain industries--notable chromate, nickel processing, coal gas, and asbestos--but the population exposed to industrial carcinogens is relatively small; these agents cannot account for the increasing lung cancer risk in the general population. The urban-rural difference in lung cancer mortality risk, though small and accounted for in part by differences in smoking habits, imply that intensity of urbanization or industrialization and air pollution may have a residual influence on lung cancer mortality. Observations on previous respiratory illness are too few in number to place any degree of assurance on relationship with lung cancer

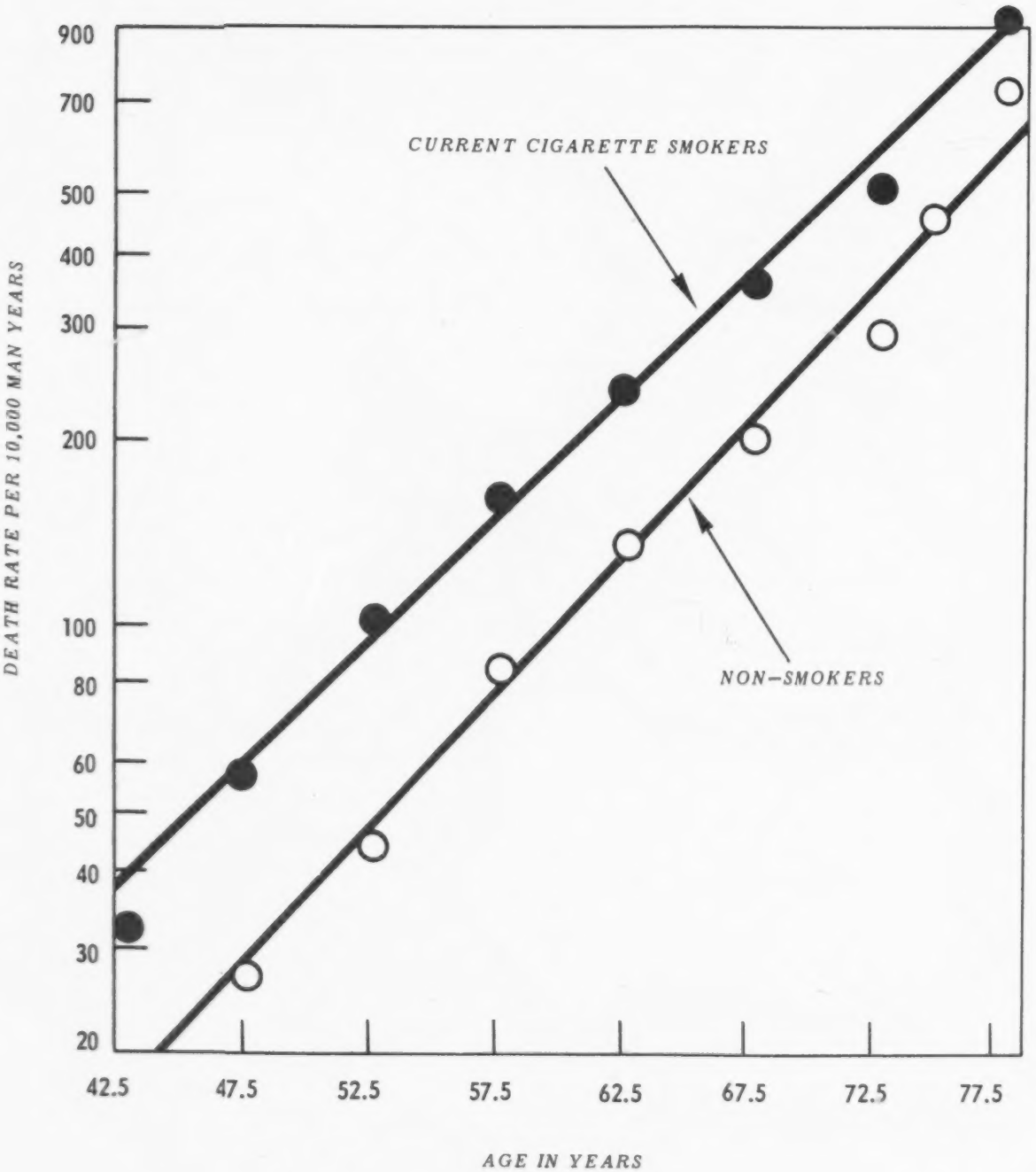
Conclusions

1. Cigarette smoking is causally-related to lung cancer in men; the magnitude of the effect of cigarette smoking far outweighs all other factors. The data for women, though less extensive, point in the same direction.

2. The risk of developing lung cancer increases with duration of smoking and the number of cigarettes smoked per day, and is diminished by discontinuing smoking.

3. The risk of developing cancer of the lung for the combined group of pipe smokers, cigar smokers, and pipe and cigar smokers is greater than in nonsmokers, but much less than for cigarette smokers. The data are insufficient to warrant a conclusion for each group individually.

DEATH RATE (logarithmic scale) PLOTTED AGAINST AGE.
PROSPECTIVE STUDY OF MORTALITY IN U.S. VETERANS



5. General Business

For the price of two packs of cigarettes a day a man can buy over $10,000 of permanent life insurance. This should concern all who are interested in making their money reach as far as possible. When you graduate most of you will be interested in some form of insurance. Non-smokers receive lower rates in both health and life insurance.

In a whole life insurance policy the non-smoker pays less money for the same protection. Here are the rates of a well known company.

$10,000 of Whole Life at Age 25

	Smokers	Non-Smokers
Annual Premium for Males	$171.70	$167.50
Annual Premium for Females	$163.10	$159.50
Cash Value		
10 years	$1241.80	$1242.00
20 years	$2744.20	$2744.60
At age 65	$6030.00	$6030.00
Dividend Accumulation		
10 years	$ 443.20	$ 443.20
20 years	$1647.40	$1647.40
At age 65	$7920.00	$7920.00

APPENDIX V

FOREIGN LANGUAGE CLASSES

The following are various examples of how the negative aspects of smoking can be indirectly introduced into the Spanish foreign language curriculum. The examples that are given here are in English for the benefit of those not familar with the language. In a regular language class, they would, of course, be in the language being taught.

1. DIALOGUE These are very frequently used in Spanish class between two students. Students are paired, and each night are given a prearranged dialogue which they present the next day to the class.

Paco: (Offering a cigarette to Juan) "Would you like a cigarette Juan?"

Juan: "No thank you, I never smoke. Where is Luisa?"

Paco: "Luisa is not coming with us. She is sick again. Her coughing is getting worse."

Juan: "I have noticed that she smokes constantly. How stupid!! She knows very well that her father is dying of lung cancer, and is only fifty years old. He smoked so much during his life."

Paco: "Yes, that is true. And Pablo, her brother, won't smoke for anything because he knows how badly his father is suffering."

Juan: "Besides, Luisa doesn't look as attractive and feminine when she smokes."

Paco: "You are right. I wonder how hard it would be for me to quit smoking . . ."

II. INTRODUCTION OF THE VERB "TO SMOKE" AND VARIOUS APPROPRIATE DRILLS

In beginning Spanish one of the verbs learned is FUMAR - to smoke. After explaining the conjunction of this verb, various drills using the verb are given and in this way negative attitudes towards smoking can be introduced.

Repeat the following sentences, conjuncting the verb to coincide with the given pronouns:

Juan smokes and has cancer.

Pablo and I

You

Maria and Jorge

The girl

Maria doesn't smoke and is in good health.

I

Ramon and I

The workers

Marta

Answer the following questions in complete sentences and be sure to use the proper verb form.

Why does Maria have cancer? Maria has cancer because she smokes.

What caused the sickness of Antonio? Smoking caused the sickness of Antonio.

Why does my friend cough in the morning? My friend coughs in the morning because he smokes too much.

Is smoking good for the health? No, smoking is not good for the health.

Translate the following sentences into Spanish:

Smoking is bad for the health.
John coughs a great deal because of his smoking.
I do not want to smoke.
The teacher does not smoke and is healthy.
Girls who smoke do not look feminine.

III. Simple sentence translations are common in Spanish classes. One sentence out of ten could deal with a negative aspect of smoking.

Translate the following sentences into Spanish:

To learn, one must study.
The women refuse to enter that store.
They went to meet their relatives.
Juan is sick and unable to go to school.
*Smoking increases the chance of lung cancer.
Suddenly the door opened.
They are learning the sentence by heart.
What does the problem consist of?
I saw him a long time ago.
It is always hot in the desert.
The moon is shining brightly tonight.
The teacher takes roll every day.
They failed their exams.
Why are you always out of breath?
*Mike quit smoking and feels better.
I am very pleased to meet you.
Take care of your health.
The heat makes us thirsty.

IV. Compositions are required every week in most advanced grammar classes. As topics are always varied, one week the teacher could give the following assignment:

Write an essay over one of the following topics:

The reasons why I smoke.

The reasons why I do NOT smoke.

The relation between smoking and cancer.

How one quits smoking.

APPENDIX V

Guidance and Counseling.

Responsibilities and possibilities.

1. Counselors might reinforce efforts in smoking education by making certain that students encountered understand fully the health threat of cigarette smoking and the seductive influences which encourage the practice.

2. Emphasize the disadvantages of smoking in various occupations.

3. Encourage self respect and respect for personal health which is somewhat incompatible with smoking.

4. Help student understand that resisting the pressures to smoke may strengthen resistance to other forms of destructive behavior.

5. Help students understand that smoking in reality is a very poor way to behave and identify as "grown up."

6. Group counseling of smoking students who would like to stop.

7. Advise student groups involved in campus anti-smoking campaign.

Home Economic Classes

In recent years the proportion of women smokers has increased faster than that of men. Most homemakers will be faced with some of these problems concerning smoking. Home Economics classes can be used to present much of the negative aspects of smoking along with the regular curriculum. The following examples may be used in various Home Economic classes.

1. Affect on Family Budget:

	1 pack	2 packs	3 packs
Cost per day*	$ .35	$ .70	$ 1.05
Cost per week	2.45	4.90	7.35
Cost per year	127.40	254.80	382.20
Cost per 10 years	1,274.00	2,548.00	3,822.00

*This is cost at current prices and it is very likely the cost will increase.

2. Benefits of Non-smokers on Insurance Plans:
Some insurance companies give discounts to non-smokers. Farmers Insurance has a 12% to 15% discount for non-smokers insurance rates. If your family is a non-smoking family, you should take advantage of insurance designed to give you special benefits.

3. Affect of Smoking Parents on Children:

There is a strong association between parent's and children's smoking habits. Within each year there are significantly more smokers in families where both parents smoke than in families where neither parent smokes. There is the availability of cigarettes in a home where parents smoke which could facilitate the child's first step towards smoking.

Discussion Questions:

You are a smoking parent and your child, age 12 has taken a pack of your cigarettes. You catch him smoking. How would you handle this situation?

4. Affect on Pregnant Women:

Women smoking during pregnancy have babies of lower birth weight than non-smokers of the same social class. They also have a significantly greater number of premature deliveries than non-smokers.

5. Affect on Appetite and Nutrition:

Most but not all experimental and clinical evidence supports the view that smoking reduces appetite and can in some cases lead to malnutrition when smokers smoke as a substitute for eating.

6. Dating:

These questions may be used in group discussions, panels, or general discussion.

Do girls like boys to smoke on a date?
Do boys like girls to smoke?
What would you do if you do not smoke and your date offers you a cigarette?
Is smoking a sign of maturity?
If you prefer that your date not smoke, do you have a right to express that preference? Are you emotionally secure enough to express that preference?

7. Fire Hazards:

In a special study of home accident fatalities in 1952 through 1953 the Public Health Service and the National Safety Council reported that 231 (18%) of 1,274 deaths from fires of known origins were due to cigarettes, cigars, or pipes. It is calculated that 130,000 home fires per year are caused by careless use of cigarettes.

8. Care of Furniture, To Remove Cigarette Burns:

To remove light burns or scorch on dark furniture, apply scratch-concealing polish or cream, rubbing with grain of wood. To remove more serious burns, mix a little rotten-stone or powdered pumice with linseed oil to form a paste. Apply paste to stain, rubbing with grain of wood. Wipe with dry soft cloth. But note that even this kind of treatment will not restore badly charred wood.

Discussion Question:

You have just purchased a beautiful sofa and have some friends over. One of them flicks ashes on your new sofa. What would you do? What would you do if it was your husband?

9. Aesthetic Aspects of Smoking:

Discussion Questions:

Does stale tobacco smoke smell bother you when you walk into a home?
Do you want your clothes to smell of stale tobacco smoke?
What affect does someone else's cigarette smoke have on non-smokers while they are eating?

10. Being a Gracious Hostess:

Discussion Questions:

Are you required to provide cigarettes for guests in your home? Ash trays?
Do you have a right to deny guests the right to smoke in your home?
Are you compelled to allow smoking in your home even at the expense of offending guests who don't smoke and are bothered by cigarette smoke?
How would you enforce a no-smoking rule in your home gracefully and without offending guests?

Industrial Arts Classes

Ideas for Correlation:

1. Dangers of Smoking in shop: (a) eyesight hazard, (b) limits use of hands, (c) flammable materials, (d) rest break instead of smoking break, (e) enforcement of no-smoking in danger zones.

2. Resistance to pressures to smoke created by fellow workers who smoke.

3. Lost time and productivity due to smoking on the job and time lost from job due to smoking related illnesses.

Mathematics Classes

Imaginative teachers of mathematics will find numerous ways of correlating materials in smoking and health with their subject. Following are some examples:

1. Work with statistical information on costs, profits, taxes, and other economic factors.

2. Work with statistics on health factors and prepare graphs, charts, budgets, tables.

3. Organize and conduct surveys on smoking practices and attitudes, and in interpreting results in mathematical terms.

4. Work with logic and proofs as applied to issues involving smoking.

SPECIFIC POSSIBILITIES

1. Kinds of Mathematics

What branch of mathematics would you say would be used to study the effects of smoking? Can you think of any problems the statistician would have to find some answer for as he studied the effects of smoking? Hints - What is smoking? Pipe, cigars, cigarettes, snuff, corn husks? Does a person who does not inhale actually smoke? If a person smokes only one cigarette a day is that smoking? How do women who smoke differ from men in their smoking habits? Does smoking have more than one effect?

2. Ratios expressed by rational numbers

In a series of studies, the following was found:

Study No.	1	2	3	4	5	6	7
Number of cancer of the lung cases who died!	129	448	535	139	98	221	414
Number of those who died that had smoked	126	423	497	126	86	213	398
Number of those who died that had *not* smoked	3	25	38	13	12	8	16

Make a ratio of the victims who smoked to the victims that did not smoke, and tell what this ratio means about the people who die from lung cancer.

3. Counting and Measuring

How would you measure (or count) the amount that people smoke?

4. Ratios

Lets look at some figures about smoking.

A man smokes ten cigarettes a day. How many does he smoke in a year? Cigarettes cost 35 cents a pack. How much must he spend just to smoke in a year? These are ratio problems, but can you make up a problem about smoking that is not a ratio problem? And can you tell why it is not?

5. Percents

If the class surveyed the neighborhood and found that of the 743 people they talked to, 60% smoked cigarettes, 7% smoked cigars and 3% smoked pipes; how many people were in each group? Round all answers.

The United States Department of Health, Education, and Welfare report to the Surgeon General says that the risk of developing lung cancer is 20 times greater in people who smoke heavily than in non-smokers. If one person in 7000 is likely to develop lung cancer when no smoking occurs, what number of the people who smoke heavily are likely to develop lung cancer in the surveyed community?

6. Decimal notation

The particles in cigarette smoke are made up of acids; glycerol, glycol, and alcohols; aldehydes and keytones; aliphatic hydrocarbons; aromatic hydrocarbons; phenols and water along with other things in extremely small amounts. The percentages for each of the groups are 12.8 acid; 8.3 glycerol etc.; 8.5 aldehyde; 4.9 aliphatic hydrocarbons. What is the sum of these percentages, and what is the weight of each in 100 grams of smoke. That is lots of smoke too!!!

7. Application of percent

If a man spends a dollar a day on smoking, what percent of the cost of a car for his son (he planned to buy a second hand car for 750 dollars) is this?

8. Gathering data

Make a summary survey of the smoking habits of your fellow students. Be sure *not to use names;* but records of starting of smoking, amount smoked each day, whether inhalation is carried out, sex of the person queried, age, and any changes in smoking habits should be carefully kept.

9. Graphs

Plot your data from the survey on a bar graph. Put the years from 1960 to 1968 on the abscissa, and put the number who started smoking that year as the ordinate. Interpret your graph.

Plot your data from the survey as a brokenline graph. Use the total time each person has smoked as the abscissa, and the amount smoked each day as the ordinate. Interpret your graph.

Plots of your allowance, and those of your class-mates can be plotted as circle graphs to show what you spend your money for.

10. Sampling

In your survey before, you asked each person about his smoking, this time, discard the date from two thirds of the class. See if your result is the same as before.

11. Writing number phases

Translate the word phrase "Cigarettes are sold for three packs for a dollar." Translate the word sentence to a number sentence. "How much does it cost Jim to smoke each year if he smokes two packs a day, and a pack of cigarettes cost 40 cents a pack."

Translate the following sentence into a number sentence in two unknowns. "If Jim and Joe pool their money and buy gas for Jim's car instead of cigarettes, they can go to the beach which is thirty miles away. Jim's car gets 15 miles per gallon of gas, and if Jim puts in twice as much money as Joe, what is the least amount of money each boy can put into the fund to go and return?"

12. Finding solution sets

Does the sentence "Lung cancer is increased by smoking." mean the same thing as "Smoking increases lung cancer," and does "$4x+5=3x+2$" have a solution or a solution set?

13. Large number and scientific notation

Guess how many cigarettes are manufactured in the United States each year? The last year for which we have a good estimate is 1967 when 552,000,000,000 of these were made. Can you get a mental picture of that many? How about putting them into cartons and computing how much space they will fill? Lets play some with this impossible number. How much do you find that it costs to buy all these cigarettes if they are sold at an average price of 40 cents for 20. How does this compare with the cost of war in Viet Nam? The national debt? Who smokes all of these cigarettes? If 60% of the people of the United States smoke, what percentage of the total production is used here? If the death rate increases when people smoke, and our best information at present says this is true, by 80%, then how many people will die unnecessarily just because this amount of tobacco is smoked? (This is a very tricky problem; think, and talk about it and see if you can work out an answer for a special study report.)

14. Use of exponents in working with large and small numbers

What is the tax income to the government if each cigarette is taxed two cents? Use prior figures for cigarettes manufactured. What part of your yearly income of 8,957 dollars do you have to pay in taxes on cigarettes if you smoke two packs a day?

15. The metric system

How many micrograms of benzo (a)pyrene, a cancer producing substance found in tobacco smoke, reach your lungs from smoking a pack of cigarettes a day? Most cigarettes are 70 mm long and most people smoke ½ of the length, also .00023 micrograms is produced per mm smoked.

How much would this be if you smoked for ten years?

16. Greatest possible error

Find the number of fires caused by smoking. Does this figure have a greatest possible error? Why not?

Find the average length of the cigarettes in a pack. Does this have a greatest possible error? Why so?

17. Precision and significant digits

In the *Report to the Surgeon General on Smoking* all figures are rounded off and only one decimal place used. Can you think of causes in the data itself, the way it was taken, and the way information was worked up, which would make this scheme of reporting more reasonable than carrying along all exact figures and decimal places?

From the same source as above, try to find information as to their relative error, accuracy, and percent error.

18. Chance events

How much more are your chances of dying from lung cancer if you smoke than if you do not smoke? Is this a simple probability of the type we are now studying? Since it is not, this shows that there are many problems that concern us very much but which must be treated in mathematical way, but in order to understand what the mathematician is saying we must be able to translate from his language to ours. This is one of the truly important reasons that everyone must know the basic facts and language of mathematics, as well as be able to use computations.

19. Applied problems

Shall I smoke or not? This is not a simple thing to decide! In light of what you have learned about using logical procedures to solve number problems, can you now put this to work in the field of helping you decide whether the pleasures of smoking are worth the cost and the risks to your health. This subject can be used as the basis of your special report for this class.

Smoking kills. The greater the number of cigarettes smoked daily the higher the death rate. For those who smoke fewer than 10 a day, the death rate is about 40% higher than for non-smokers. For those who smoke from 10 to 19 cigarettes daily, it is about 70% higher than for non-smokers; from 20 to 29, about 80% higher; 30 - 39, about 90% higher; and for those who smoke 2 packs a day or more, it is about 120% higher.

1. To graph the above information, should you choose a bar graph? (No, because the rate at 0 cigarettes is not the same as at 9, and a bar graph makes it appear to be.)

2. Would a line graph be satisfactory? (Yes, because the rate would hit every % as the cigarette smoking increased.)

3. If you chose to use a pictograph to present the information what symbols might you choose? (Skull and crossed bones, coffins, wreaths . . .)

4. Make a graph of the given information showing percent of death rate among smokers over non-smokers on the vertical axis, and cigarettes per day on the horizontal axis.

5. Many people think that if you smoke less than a pack a day, it won't hurt you. What does your graph show about this?

6. How many cigarettes a day should you smoke if you don't want to increase your risk of early death?

About 300,000 deaths each year are caused by smoking. About 41,000 are caused by automobile accidents. How many more people are killed each year by cigarettes than by cars?

The population of this country is about 200,000,000. Every year the tobacco industry spends about $1.50 for every man, woman and infant, on advertising.

1. How much does the industry spend on advertising each year? The industry gets about 1,400 people to begin smoking each day.

2. How many new smokers are there each year?

3. How much does the industry spend for each such new smoker?

Start this exercise with a time check (to the second).

It is estimated that there are 300,000 premature deaths in this country each year due to cigarette smoking.

1. How many is that per week?

2. How many per day?

3. How many per hour?

4. Every 105 seconds a person dies of a disorder related to his smoking.

Check the time.

5. How long did it take you to do this exercise?

6. How many persons have died because of cigarette smoking in this length of time?

The following exercise would be more effective if the teacher smoked a cigarette as the work begins, having some member of the class time him. If direct measurement is not desireable, 5 minutes is a reasonable approximation.

On the average, a cigarette smoker's life is shortened by about 6 years.

1. If he smokes a pack a day, how many cigarettes does he smoke per day?

2. How many per week?

3. How many per year?

4. If he smokes for 40 years, how many cigarettes has he smoked?

5. How many days are there in 6 years?

6. How many hours?

7. How many minutes?

8. How many minutes of his life does the average cigarette smoker lose for each cigarette smoked?

9. How long does it take to smoke a cigarette?

10. How many minutes of his life does the average cigarette smoker lose for each minute spent smoking?

It has been shown that for every 170 deaths due to cancer of the lung among non-smokers, there are 1,833 deaths among smokers.

1. What is the probability that a lung cancer victim was a smoker?
   1,833/2,003 or slightly more than 9/10

2. What are the odds that he was? more than 9 to 1

Since 75 smokers die of cancer of the larynx for every 14 nonsmokers who do so, what is the ratio of deaths from this cause of smokers to nonsmokers? 5.4/1

About 540 smokers die of bronchitis and emphysema for every 90 nonsmokers.

1. What percent of the total number who die from this cause are smokers? 85.7%

2. What percent are nonsmokers? 14.3%

3. If I start smoking, I am increasing my risk of dying from these causes by 500%

   (To add reality to this problem, have the children take a deep breath and hold it; and then, without letting any of that air out, attempt to breathe. "This is what emphysema feels like.")

In comparing death rates between smokers and non-smokers, it is shown that those who begin smoking before the age of 15 die at the ratio of 2 to 1 compared with non-smokers. Those who begin after the age of 25 have a ratio of 4 to 3 compared with non-smokers. Is it more dangerous to begin smoking before 15, or after 25?

1. The cost of one pack of cigarettes is _____ ?

2. The average smoker smokes about a pack a day. How much does he spend per week?

3. How much per year?

4. If you begin smoking this amount at 15 and continue to smoke for 50 years, how much will you have to spend on cigarettes?

5. Name some other things you could buy with that amount of money.

6. Wouldn't you rather smoke?

There are about 130,000 fires in this country each year which result from the careless use of cigarettes.

1. How many fires per week are caused by smoking?

2. How many per day?

3. How many per hour?

4. Every _____ minutes a fire breaks out because of the careless use of cigarettes.

APPENDIX V

Physical Education Classes

Many possibilities exist for correlating smoking education with physical education.

1. Training rules on smoking developed with team enforcement of rules.
2. Position of coaches made abundantly clear.
3. Physiological damage of smoking limiting physical capacities.
4. Anti-athletic and anti-life symbolic nature of cigarette smoking.
5. Bulletin boards on smoking and health and smoking as related to physical activity.
6. Testimony of town's local athletes who do not smoke.
7. Support "non-team members" in their enjoyment of recreational sports, and in no-smoking as a means to continuing sports enjoyment.

APPENDIX V

Science Classes

Many of the rich possibilities for correlating smoking education with science classes are readily apparent. The case against cigarette smoking is largely scientifically based.

1. Scientific method as applied to smoking and health research.
2. Experiments, demonstrations, problem solving on effects of smoking on human physiology and body systems (see science kit for smoking and health education).
3. Smoking and the environment (smoking as a personal and public form of air pollution).
4. Science class or club projects on smoking and health.
5. Scientific vocabulary on smoking and health.

(See "Science Kit for Smoking and Health Education" prepared by Smoking Research/San Diego)

APPENDIX V

Social Studies Classes (History, Sociology, Government, Geography, Economics)

These are classes especially rich in opportunities for correlating materials on smoking:

1. History and economics of tobacco as a cash crop.
2. Development of smoking as a social custom.
3. Laws regulating use of tobacco.
4. Manipulative power of tobacco industry.
5. Tobacco taxation as a major source of revenue.

6. Nature and impact on culture and individuals of tobacco industry advertising.

7. Psycho-social appeals and influence of tobacco use and tobacco promotion.

8. Federal farm subsidies for tobacco growers.

9. Tobacco as a soil depleting non-essential crop.

A. HISTORY - United States History
Tobacco and the Colonial United States

I. Relate tobacco as a central factor in the early colonial development in the United States. How its successful introduction into the New World made Jamestown a viable and profitable colony. Also how its exportation to England brought more revenue than the products from all other colonies combined.

II. Relate the following effects of tobacco on the Colonies.

Economically

1. Furnished the future United States an economic base to maintain its early settlers.
2. Tobacco exercised a great drain on soil fertility and forced planters inland in search of new land for cultivation.
3. Tobacco became an important means of exchange within the colonies. Tobacco could purchase rum, land, and slaves.

Politically

1. The plantation system of tobacco cultivation produced a wealthy landowning class that would furnish some of America's first political leaders.
2. English attempts to regulate and tax the rich colonial tobacco industry gave rise to our first pupular uprisings in America. (Bacon's Rebellion of 1677 and Culpeper's Rebellion of 1682).

Socially

1. Established a pattern of life which would persist right up to recent times. A small wealthy landowning class, a middle class of small farmers and tradesmen, and the poor whites, and certainly last of all, the Negroes who furnished the agricultural labor supply.
2. The introduction of 22 Negro slaves to Jamestown in 1619 marked a highly significant point in the development of American society. By the eve of American independence, there were nearly as many Negroes as whites in the Southern Colonies.

III. Points for consideration:

1. For every person over 15 in 1962, there was 11 pounds of tobacco consumed.
2. What started out as a casual habit of rich aristocrats is now practiced by some 70 million Americans in all stations of life.
3. While tobacco still ranks among the ten most valuable agricultural products of the United States, it kills some 300,000 Americans a year--nearly as many as were lost in three years of World War II.

B. SOCIOLOGY - Senior Problems

Psycho-social Aspects of Smoking

I. Relate certain demographic factors which have been associated with cigarette smoking, such as: age, sex and socioeconomic level.

Age

1. Few children smoke prior to age 12
2. From age 12 on there is an increase until age 35 or 40 when there is a drop.
3. By the 12th grade level, 40-55% of children are found to be smokers.

Sex

1. Fewer women smoke than men and their smoking is restricted to cigarettes.
2. At the same time, their proportion of smokers is increasing at a higher rate.

Socioeconomic

1. The lower or working classes contain more smokers and earlier starters.
2. White collar, professional, managerial and technical occupations contain fewer smokers than craftsmen, salespersons and laborers.

II. Relate studies concerning personality and smoking.

1. There appears to be a very significant relationship between extroversion and smoking.
2. Smokers tend to live faster and more intensely, and to be more socially outgoing.
3. Many of the smokers personalities could be described as neurotic. Neuroticism appears to be associated with the habit of smoking.

III. Relate sociological viewpoints in reference to why people smoke.

1. Some are based on the family the patterns learned from our mother and father, others are sociability initiative or the wish-for-adult-status factor.
2. Social stimulation plays a major role in a youngperson'sfirst experiments with smoking.
3. The cultural milieu has a strong influence, a culture tending to promote, prohibit or reject one to inhibit smoking.

C. GOVERNMENT - Senior Civics
Government Regulations on Tobacco and Smoking

I. Relate what remedies the United States Government could employ to limit the danger of cigarette smoking.
   1. Exert legislative authority to expand the powers of the Food and Drug Administration to cover tobacco.
   2. Promote education for both the presmoking adolescent and the adult smoker.
   3. Reform cigarette advertising and promotion.
   4. Supplement the educational materials originated by the Cancer Society and the individual states.
   5. Create a Division of Smoking Control within the Department of Health Education and Welfare.

II. Relate the views in the Consumer's Union Report in Smoking and the Public Interest, which points out this outline for an effective program:
   1. Prohibition of sales to minors, smoking by minors, sales through unattended vending machines, etc.
   2. The use of increased taxation on cigarettes to exert economic pressure, and selective taxation to discourage the manufacture and sale of cigarettes with high nicotine and tar content.
   3. Regulation of cigarette labeling.
   4. The regulation (or even outright prohibition) of cigarette advertising.
   5. A program of counter-advertising.
   6. A program of education aimed at elementary, high school and college students.
   7. A system of clinics and other therapuetic aids to help individual smokers or groups to stop smoking.

III. Relate the views and actions of other countries and governments and their legislation against smoking.
   1. In Finland, advertising of cigarettes on TV was ended in July, 1962.
   2. In Italy, all advertising of tobacco products was banned by law in May, 1962.
   3. The Danish Cancer Society proposed in 1962 that cigarette taxes be raised higher than the present 80% level to curtail smoking.

D. GEOGRAPHY - World History

The Role of Tobacco in World History

I. Relate the discovery of the New World and introduce tobacco as one of the new products brought to Europe.

1. The desire for wealth, empire, trade, adventure and the spread of Christianity spurred the leading nations of Europe to explore the unknown.
2. Spain turned her attention to the New World and added to her domain a territory larger than that of all Europe.
3. Spain introduced new supplies of gold and silver, and new products of coffee, chocolate, sugar cane and tobacco.

II. Relate the practice of smoking – that is, non-tobacco smoking – of the past.

1. Non-tobacco smoking had been in practice in ancient Greece and elsewhere, but it was evidently considered medicine, not pleasure, and in any case, the substances smoked, such as dried cow dung, never quite caught on.

III. Relate the discovery of tobacco and its introduction to Europe.

1. Tobacco was native only in the Americas, and its original users were the Indians.
2. These Indians snuffed it through a Y-shaped pipe called a toboca, from which the word tobacco may be derived.
3. The first Europeans to see tobacco were Christopher Columbus and his crew, who saw Indians "drinking smoke."
4. Tobacco was brought to England by Sir John Hawkins (1565), by Drake, and by Sir Ralph Lane; Raleigh made smoking of it fashionable at court, and took a puff or two before he went to the scaffold.
5. In Elizabeth's time it was too costly for its use to be widespread.

IV. Relate the opposition to tobacco in England.

1. In 1604 King James sent forth a mighty "counterblast to tobacco," lamenting its introduction into England.
2. He warned against "a certain venomous quality" in it.

> . . . .A custom loathesome to the eye, hateful to the nose, harmful to the brain, dangerous to the lungs, and, in the black stinking fume thereof, nearest resembling the horrible Stygian smoke of the pit that is bottomless. . . .

3. However, despite this and heavy taxes, there were seven thousand tobacco shops in London.

E. ECONOMICS - Senior Economics
Conversion - An Economic Solution to Smoking

I. Relate the importance the tobacco industry has in the American economy.
   1. A great source of wealth and an integral componant of the economy.
   2. A source of livelihood for many states, communities and citizens.
   3. How would a shutdown of the industry effect the economy?

II. Relate the alternative to conversion for the tobacco industry.
   1. The tobacco industry could convert their present products and expand into other fields.
   2. As they made this change, they could curtail their cigarette advertising, promotion and sales.
   3. An increased campaign against smoking could be waged as the industry completed the conversion.

III. Relate the role that government would play in the conversion process.
   1. The government could encourage this move by granting tax concessions to companies making the move.
   2. The government could allow depreciation allowances to cigarette companies in their non-tobacco enterprises.

IV. Relate the results of such a conversion.
   1. The tobacco industry would no longer push cigarettes solely on the basis of "a one item profit maker." They would have other fields to expand and profit in.
   2. There would be no "shake-up" in the economy due to industrial shutdown.
   3. The final elimination of smoking as a health hazard.

SUGGESTED RELATED TOPICS

A. U.S. History and Tobacco

1. Study tobacco and its role in America's first popular uprising, Bacon's Rebellion (1677) and Culpeper's Rebellion (1682).
2. Investigate the impact of tobacco upon American society, especially as regards to the introduction of Negro slaves into the colonial United States.
3. Evaluate the economic importance of tobacco to the United States in the 17th and 20th centuries.
4. Determine the effect of the soil-exhausting tobacco plant upon westward expansion in the Southern Colonies.
5. Compare the responsibilities of the federal government in public health--the muckrakers and initial health regulation to the current smoking question and the U.S. Surgeon General's report.

B. Sociology and Tobacco

1. What are some of the sociological reasons it is difficult to stop smoking?
2. Who makes the decisions as to whether you smoke or not?
3. Why do people smoke?

C. Government and Tobacco

1. What laws regulate the advertising of cigarettes?
2. What federal or state laws regulate the labeling and sale of cigarettes?
3. How much money is allocated by Congress for Cancer research?
4. By what legislative processes could smoking be declared illegal? Would it work?
5. How much annual income do the federal and state governments derive from cigarette taxation?
6. As a citizen of the United States, what part do you play in a National Health Program?
7. What are the roles of the American Cancer Society, the American Medical Association, and the Cigarette Industry as pressure groups?

D. World Geography and Tobacco

1. Discuss the cultural impact of tobacco on the Old World.
2. What important role did the discovery of tobacco play in the development of the New World and world trade?
3. Trace the development of the tobacco industry in the United States. How great a part does this industry play in the economic, political and social structure of the United States?
4. What is the moral obligation of the individual, the community and the local and federal governments toward the use of tobacco since it is now known to be dangerous to health?
5. What are international organizations such as the World Health Organization doing in the field of smoking and cancer research?
6. Should government make tobacco consumption illegal?

SUGGESTED RELATED TOPICS

E. Economics and Tobacco

1. Study the cost of smoking in regard to the family budget.
2. What are the economical consequences in a tobacco oriented state or community if smoking should become illegal?
3. Do smokers have to pay more for insurance? Why?
4. Study the role of tobacco as a major export product.
5. Note the role of the tobacco industry in the American economy.
6. Study the loss of life and property resulting from fires caused by smoking.
7. Compare the cost that the tobacco industry puts into advertising, with federal funds alloted for health research opposing the use of tobacco.